SPECTRUM®

TRMM/TRMMIM
Management Module Guide

CABLETRON SYSTEMS

The Complete Networking Solution™

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Cabletron Systems, Inc.
P.O. Box 5005
Rochester, NH 03866-5005

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Preface

Use this guide if you are going to manage a TRMM/TRMMIM management module through SPECTRUM. Before reading this guide, you should be familiar with SPECTRUM's functions as described in the Operation documentation and the Administration documentation.

What Is in This Guide

The following chapter descriptions outline the organization of the *TRMM/TRMMIM Management Module Guide.*

Chapter	Description
Chapter 1 Introduction	Describes the TRMM/TRMMIM management module and model types.
Chapter 2 Device View	Describes the Device view's representation of a TRMM/TRMMIM, as well as the views available from the Device menu.
Chapter 3 Configuration Views	Describes the TRMM/TRMMIM Configuration views, which provide network management information for the device.
Chapter 4 Event and Alarm Messages	Contains a listing and explanation of the event/alarm messages generated in the Event Log or Alarm Manager for the TRMM/TRMMIM management module.
Chapter 5 Application View	Describes the Application views for the TRMM/TRMMIM management module and the major and minor application information provided by the view.

Conventions

In this manual, the following conventions are used.

- Command names are printed in bold; for example, **Clear** or **Save & Close**.
- Menu selections to access a view are printed in bold; for example, **Configuration** or **Detail**.
- Buttons are represented by a shadowed box; for example, Help.

Related Reading

When using this guide, you should have a clear understanding of SPECTRUM functionality and navigation techniques as described in the Administration documentation, the Operation documentation, and the following documentation:

SPECTRUM Report Generator User's Guide

Getting Started with SPECTRUM for Operators

Getting Started with SPECTRUM for Administrators

How to Manage Your Network with SPECTRUM

Other Related Documentation

Refer to the following documentation for more information on managing TCP/IP-based networks:

LAN Troubleshooting Handbook, Mark Miller (1989, M&T Publishing, Inc.)

The Simple Book — An Introduction to Management of TCP/IP-based Internets, Marshall T. Rose, Performance Systems International, Inc.

Computer Networks, Andrew S. Tanenbaum, Prentice-Hall, Inc.

Local Area Networks, Architectures and Implementations, James Martin & Kathleen K. Chapman for the Arben Group, Inc. (1989, Prentice-Hall, Inc.)

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Location	Mail	FAX	Telephone
North America	Cabletron Systems, Inc. P. O. Box 5005 Rochester, NH 03866-5005 E-mail: spectrum-support@ctron.com	603-337-3075	603-337-3500
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Chapter 1

Introduction

What Is in This Chapter

This chapter describes the SPECTRUM management module for the Token Ring Management Module (TRMM) and the Token Ring Management Media Interface Module (TRMMIM). It also provides the model type names assigned to the TRMM (HubCSITRMM) and TRMMIM (HubCSITRMMIM) in SPECTRUM. The model type name refers to the template used to specify attributes, actions, and associations for device models in SPECTRUM.

TRMM/TRMMIM Management Module

SPECTRUM manages the TRMM/TRMMIM devices using the SNMP network management agent and the Management Information Bases (MIBs), both of which are included with the management module.

TRMM/TRMMIM Applications

The TRMM/TRMMIM supports both common and device-specific applications. Common applications are described in the *Bridging Applications Reference*, the *MIB II Applications Reference*, and the *Miscellaneous Applications Reference*, and are as follows:

- Bridging (CSIBridge)
  - Spanning Tree (Ct_Stp_App)
  - Transparent (Transparnt_App)
  - Ethernet Special Database (Ct_BdgEnet_App)
  - Static (Static_App)
  - PPP
  - Source Routing
- MIB-II (SNMP2_Agent)
  - IP (IP2_App)
  - System (System2_App)
  - ICMP (ICMP_App)
  - UDP (UDP2_App)
- DownLoad App (CtDownLoadApp)

The TRMM/TRMMIM supports two device-specific applications. These applications are described in Chapter 5, *Application View*, and are as follows:

- Token Ring Application (CtTokenRingApp)
- Token Ring Management (TokenRingMgt)

RMON and DLM are also supported, and SPECTRUM management of these MIBs may be purchased separately. Refer to the documentation provided with the RMON and DLM management modules for descriptions of these capabilities. The following chapters explain how to use SPECTRUM and the management module software to monitor and manage the TRMM/TRMMIM.

SPECTRUM and the TRMM/TRMMIM

The TRMM/TRMMIM is an intelligent Token Ring concentrator providing port level control and statistics for Cabletron's Token Ring Media Interface Modules. It is fully IBM Token Ring compatible, IEEE 802.5 compliant, and uses an Intel i960 RISC processor for in-depth management functions. SPECTRUM management of the TRMM/TRMMIM is based on the following Management Information Bases (MIBs), which come as a part of the management module:

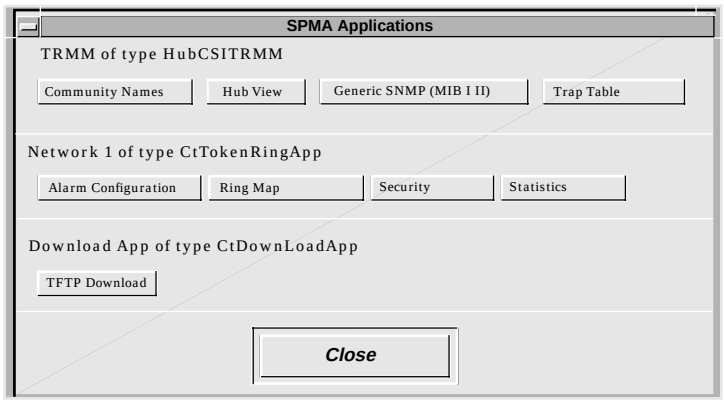
- Cabletron Dot5 MIB
- Cabletron Dot5 Physical MIB
- Cabletron Token Ring FNB MIB
- Cabletron DownLoad MIB
- Internet MIB-II (RFC 1213)
- Cabletron Chassis MIB

SPMA and the TRMM/TRMMIM

SPECTRUM also provides SPMA (SPECTRUM Portable Management Application) functionality for the TRMM/TRMMIM. To open the SPMA Application view from any SPECTRUM view, do the following:

1. Select Icon Subviews from the View menu or click the middle mouse button on the icon.
2. Select Utilities from the Icon Subviews menu.
3. Select Application from the Utilities menu.

The SPMA Application view provides buttons to select SPMA-specific views and dialog boxes. An example of an SPMA Application view is provided below.



SPMA Application View

SPMA functionality for the TRMM and the TRMMIM is described in the following documents:

The *SPECTRUM Portable Management Application for the TRMM or TRMMIM User's Guide*:

- Chapter 2, *Using the TRMM/TRMMIM Hub View*, describes the visual display of the Hub and explains how to use the mouse within the Hub View; the operation of some basic functions available only from the Hub view are also described.
- Chapter 3, *Ring Map*, describes how to graphically display all stations inserted into a selected Token Ring network. Using the Ring Map application, you can display stations and perform station searches according to various parameters, view and compare errors detected on the ring, configure the ring management station, set station drops or station names, view summary history information, and launch other SPMA Token Ring applications.

- Chapter 4, *Alarm Configuration*, describes how to set thresholds and enable or disable alarms at the network (channel), module, and port levels.
- Chapter 5, *Statistics*, describes how to use the statistics windows to view ring and station-specific information, including traffic counts, total error counts, and error type breakdowns.
- Chapter 7, *Ring Security Configuration*, describes how to remotely configure security for the TRMM/TRMMIM. The Ring Security application allows you to control access to your Token Ring network and specify a security mode for stations illegally attempting to enter the ring.

The *SPECTRUM Portable Management Application Tools Guide*:

- Chapter 2, *Using the MIB I, MIB II Tool*, explains how to use this tool to view and change MIB I and MIB II object ID values.
- Chapter 3, *Using the Community Names Tool*, explains Cabletron's "Component" structure of device MIBs and describes how to change device community names.
- Chapter 5, *Using TFTP Download Tool*, explains how to upgrade firmware on Cabletron devices equipped with Flash EEPROMs.
- Chapter 6, *Using the SNMP Traps Tool*, explains how to establish which network management workstations on your network will receive trap alarms from a selected device and provides a brief overview of some of the traps supported by Cabletron Systems' devices.

Chapter 2

Device Views

What Is in This Chapter

This chapter provides information for the following TRMM/TRMMIM Device views:

- Logical Device view
- Physical Device view

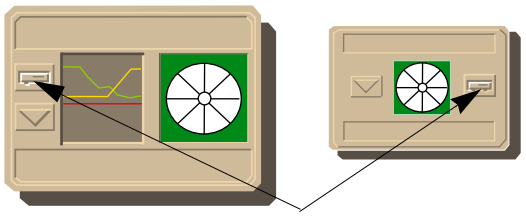
The Logical Device view for the TRMM/TRMMIM contains icons that represent the TRMM/TRMMIM devices and their ports. This chapter describes those icons and the subviews available from the Device view that allow you to monitor and manage the TRMM/TRMMIM and its ports.

The Physical Device view for the TRMM/TRMMIM allows you to view a physical representation of the devices.

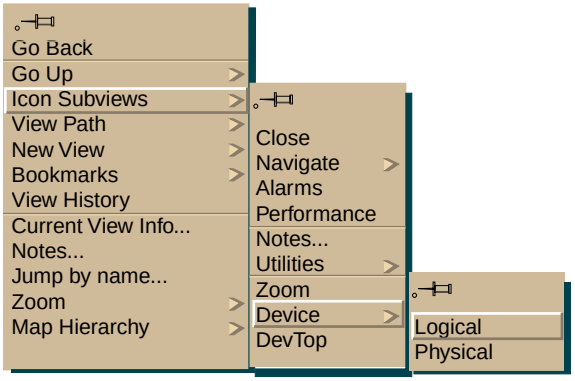
Accessing the Device Views

Access the Device views using one of the following methods:

- Double-click on the Device view button of the TRMM/TRMMIM device icon. This will open the Device view that was opened last (i.e., Logical or Physical).



- Highlight the Device icon and select Device->Logical or Device->Physical from the Icon Subviews menu.

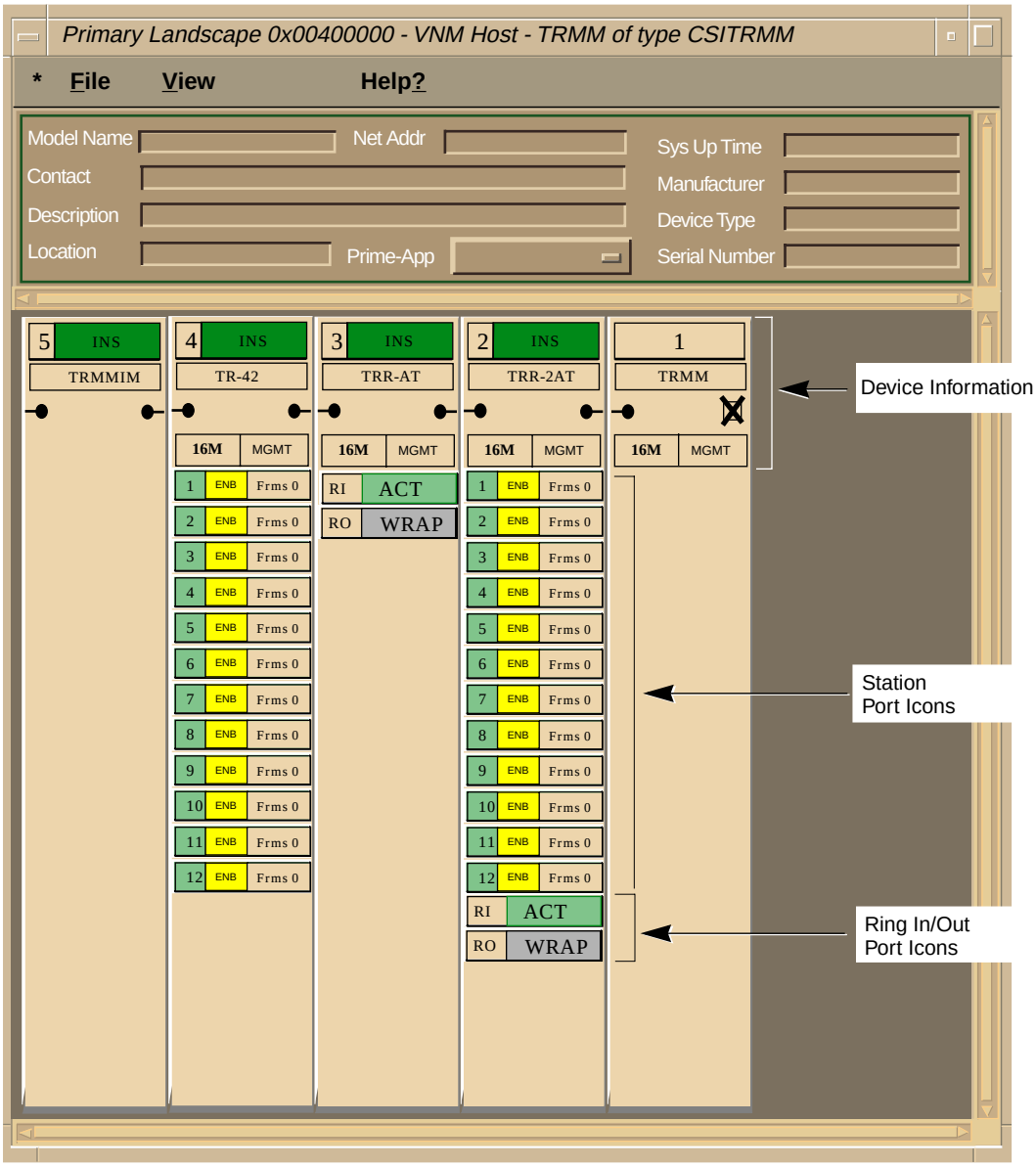


Logical Device View

The logical Device view (Figure 2-1) provides information about the device, the modules it manages, and their station and ring ports. The Device icon is divided into three sections.

- The Device Information section - on both the TRMM/TRMMIM and any modules it manages - presents information about the device.
- The Station Port Icons section - only available on managed modules - presents information about each station port.
- The Ring In/Out Port Icons section - only available on managed modules - presents information about the Ring In and Ring Out ports.

Figure 2-1. TRMM Logical Device View



TRMM/TRMMIM Device Information Section

The device information section of the TRMM/TRMMIM icon displays information specific to that module. This section also provides double-click zones and a pop-up menu as shown in Figure 2-2.

To access the pop-up menu, position the cursor on the device information section and press the applicable mouse button, or click on the section to highlight the icon and select Icon Subviews from the View menu. Table 2-1 provides definitions of the menu selections.

Figure 2-2. TRMM/TRMMIM Device Information Section Detail

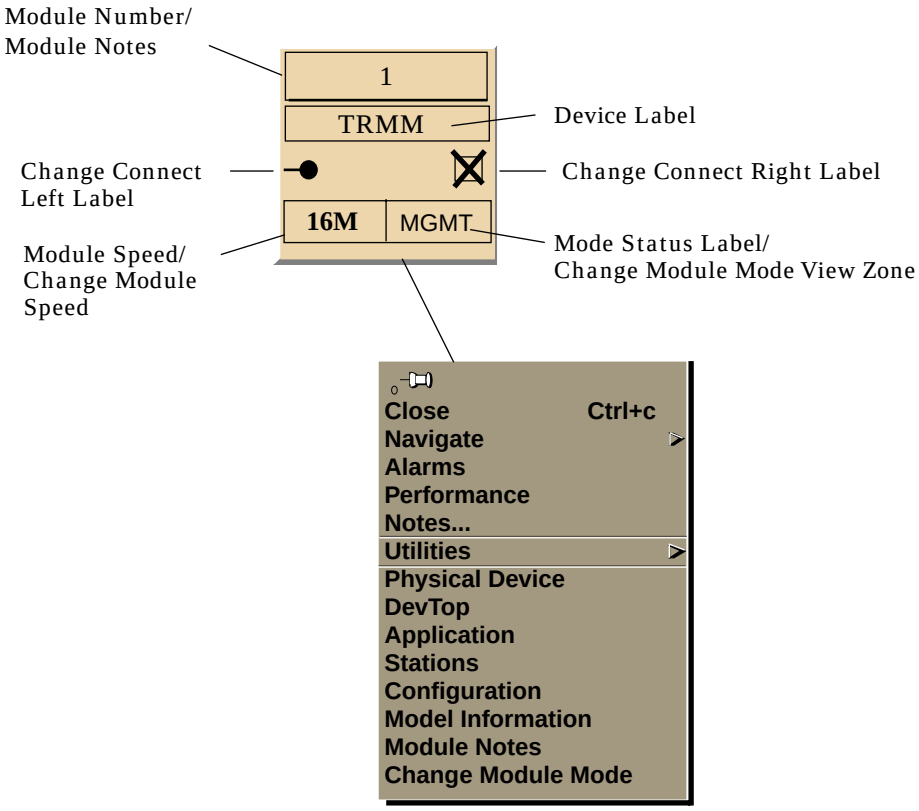


Table 2-1. TRMM/TRMMIM Device Information Section Menu Selections

Menu Selection	Description
Performance	Opens the Token Ring Performance View.
Physical Device	Opens the Physical Device View.
DevTop	Opens the Device Topology View.
Application	Opens the Application View.
Stations	Opens the Token Ring Station Table View.
Configuration	Opens the Device Configuration View.
Model Information	Opens the Model Information View.
Module Notes	Opens the SPECTRUM Notes facility for the selected module.
Change Module Mode	Displays the Change Module Mode View, which allows you to toggle the mode of the module between Management and Auto.

Managed Device Information Section

The device information section of the managed module icon displays information specific to that module. This section also provides specific double-click zones and a pop-up menu as described in Figure 2-3.

To access the pop-up menu, position the cursor on the device information section and press the applicable mouse button or click on the section to highlight the icon and select Icon Subviews from the View menu. Table 2-2 provides definitions of the menu selections.

Figure 2-3. Managed Module Device Information Section Detail

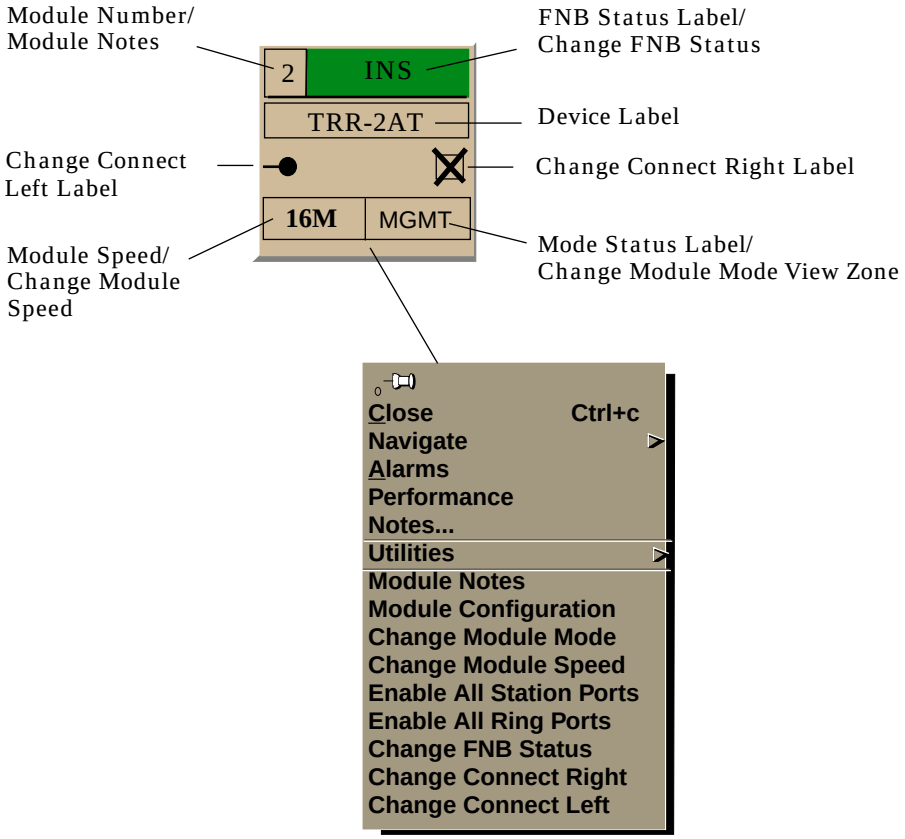


Table 2-2. Managed Module Menu Selection

Menu Selection	Description
Module Notes	Opens the SPECTRUM Notes facility for the selected module.
Module Configuration	Opens the Module Configuration view for the selected module.
Change Module Mode	Displays the Change Module Mode view, which allows you to toggle the mode of the module between Management and Auto.
Change Module Speed	Displays the Change Module Speed view, which allows you to toggle the speed of the module between 4Mb and 16Mb.
Enable All Station Ports	Displays the Enable All Station Ports view, which allows you to enable all the station ports on the module.
Enable All Ring Ports	Displays the Enable All Ring Ports view, which allows you to enable all the ring ports on the module.

Table 2-2. Managed Module Menu Selection (Continued)

Change FNB Status	Opens the Change FNB (Flexible Network Bus) Status dialog box, which allows you to toggle the FNB Status between Insert and Bypass.
Change Connect Right	Opens the Change Connect Right dialog box, which allows you to toggle the right connection between Attach and Detach.
Change Connect Left	Opens the Change Connect Left dialog box, which allows you to toggle the left connection between Attach and Detach.

Device Information Section Description

The Device information section consists of several areas which provide the following information:

Module Number

Displays the number identifying the module in the hub. Double-clicking this area opens the Module Notes facility for this module.

FNB Status Label (managed modules only)

Displays the FNB status for that device. Double-clicking this area opens the Change FNB Status dialog box.

- INS - Inserted
- BYP-Bypassed
- ENB-Enabled
- INIT Initialized

Device Label

Displays the type of physical device being modeled.

Change Connect Left

Double-clicking this area opens the Change Connect Left dialog box, which allows you to toggle the left connection between Attach and Detach.

Change Connect Right

Double-clicking this area opens the Change Connect Right dialog box, which allows you to toggle the right connection between Attach and Detach.

Module Speed

Displays the speed of the ring (4M or 16M) for that module. Double-clicking this area opens the Change Module Speed dialog box, which allows you to toggle between 4M and 16M.

Mode Status Label

Displays the current mode setting for the module (MGMT or AUTO). Double-clicking this area opens the Change Mode dialog box.

Station Port Icons

The Station Port icons of the managed module display information specific to that module's station ports. These icons also provide specific double-click zones and a pop-up menu as described in Figure 2-4.

To access the pop-up menu, position the cursor on a Station Port icon and press the applicable mouse button or click on the Station Port icon to highlight the icon and select Icon Subviews from the View menu. Table 2-3 provides definitions of the menu selections.

Figure 2-4. Station Port Icon Detail

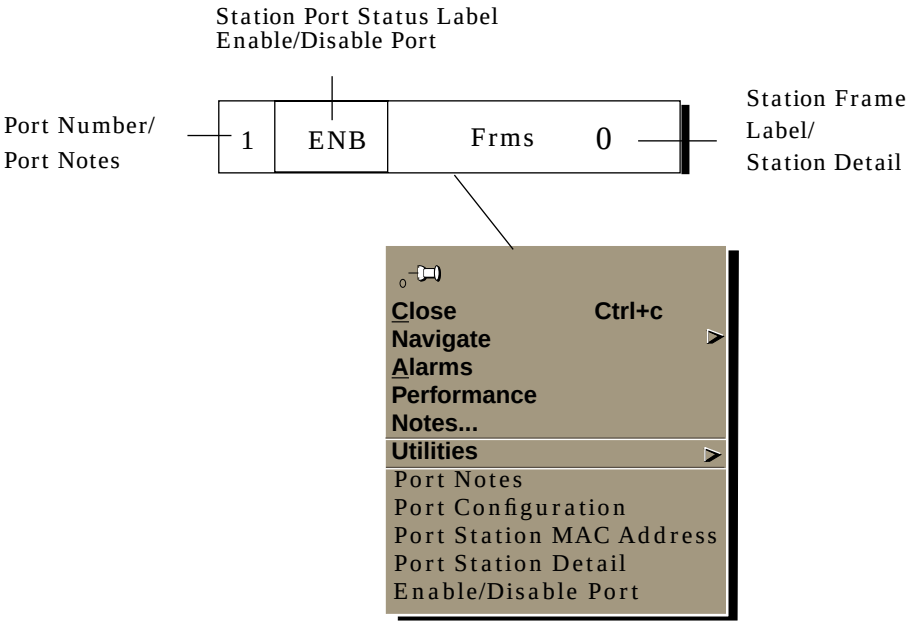


Table 2-3. Station Port Icon Menu Selections

Menu Selection	Description
Port Notes	Opens the SPECTRUM Notes facility for the port.
Port Configuration	Opens the Port Configuration view for the selected port.
Port Station MAC Address	Opens the Port Station MAC Address view.
Station Detail	Opens the Token Ring Station Detail view for the station (if any) connected to the selected port.
Enable/Disable Port	Displays the Enable/Disable Port view, which allows you to toggle the selected station port between enabled and disabled states.

Station Port Icon Description

The Station Port icons consist of three areas providing information pertaining to the station ports (refer to Figure 2-4). These areas provide the following information:

Port Number
The specific number of this station port. Double-clicking on this area opens the Port Notes facility.

Station Port Status Label
The status of the station port, as follows:

INS (Inserted)	Green
BYP (Bypassed)	Blue
ENB (Enabled)	Yellow
INIT (Initializing)	Gray

Double-clicking on this area opens the Enable/Disable dialog box.

Station Frames Label
Displays the current frame rate for the station on the port. Double-clicking on this area opens the Cabletron Token Ring Station Detail view.

Ring In/Out Port Icons

The Ring In/Out Port icons of the managed module display information specific to that module's Ring In or Ring Out ports. These icons also provide specific double-click zones and a pop-up menu as described in Figure 2-5.

To access the pop-up menu, position the cursor on a Ring In or Ring Out Port icon and press the applicable mouse button or click on the icon to highlight it and select Icon Subviews from the View menu. Table 2-4 provides definitions of the menu selections.

Figure 2-5. Ring In/Out Port Icon Detail

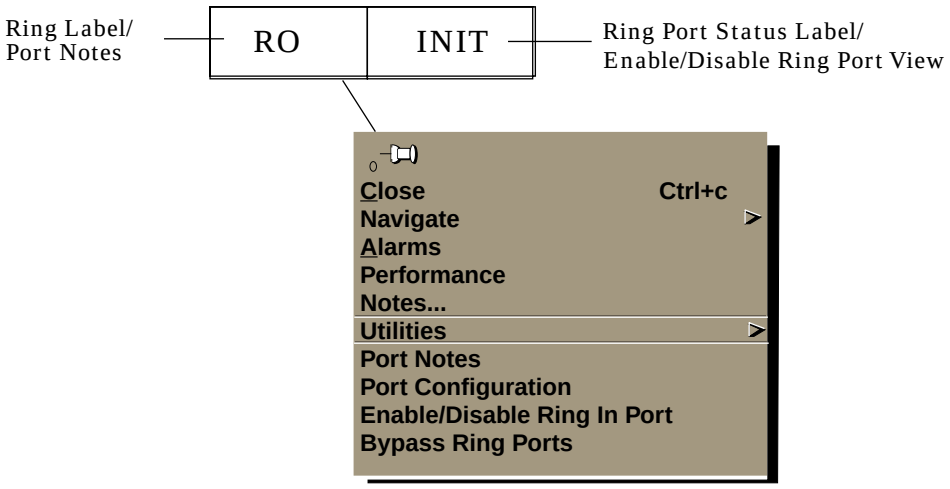


Table 2-4. Ring In/Out Port Icon Menu Selections

Menu Selection	Description
Port Notes	Opens the SPECTRUM Notes facility for the port.
Port Configuration	Opens the Port Configuration view for the selected port.
Enable/Disable Ring In/Out Port	Displays the Enable/Disable Ring In/Out Port view, which allows you to toggle the selected Ring In or Ring Out Port between enabled and disabled states.
Bypass Ring Ports	Opens the Bypass Module Ring Port view, which allows you to bypass the ring ports.

Ring In/Out Port Icon Description

The Logical Ring In/Out Port Icons consist of two areas providing information pertaining to the ring in/out ports (refer to Figure 2-5). These areas provide the following information:

Ring Label
Identifies the port as RI (Ring In) or RO (Ring Out). Double-clicking on this area opens the Port Notes facility for the port.

Ring Port Status
The status of the ring in/out port, as follows:

ACT (Active) - Link, Port EnabledGreen
ACT (Active) - Link, Port DisabledBlue
WRAP - No Link, Port DisabledBlue
WRAP - No Link, Port EnabledRed
INIT (Initializing) Gray

Double-clicking on this area opens the Enable/Disable Ring In/Out Port view, which allows you to toggle between enable and disable for this ring.

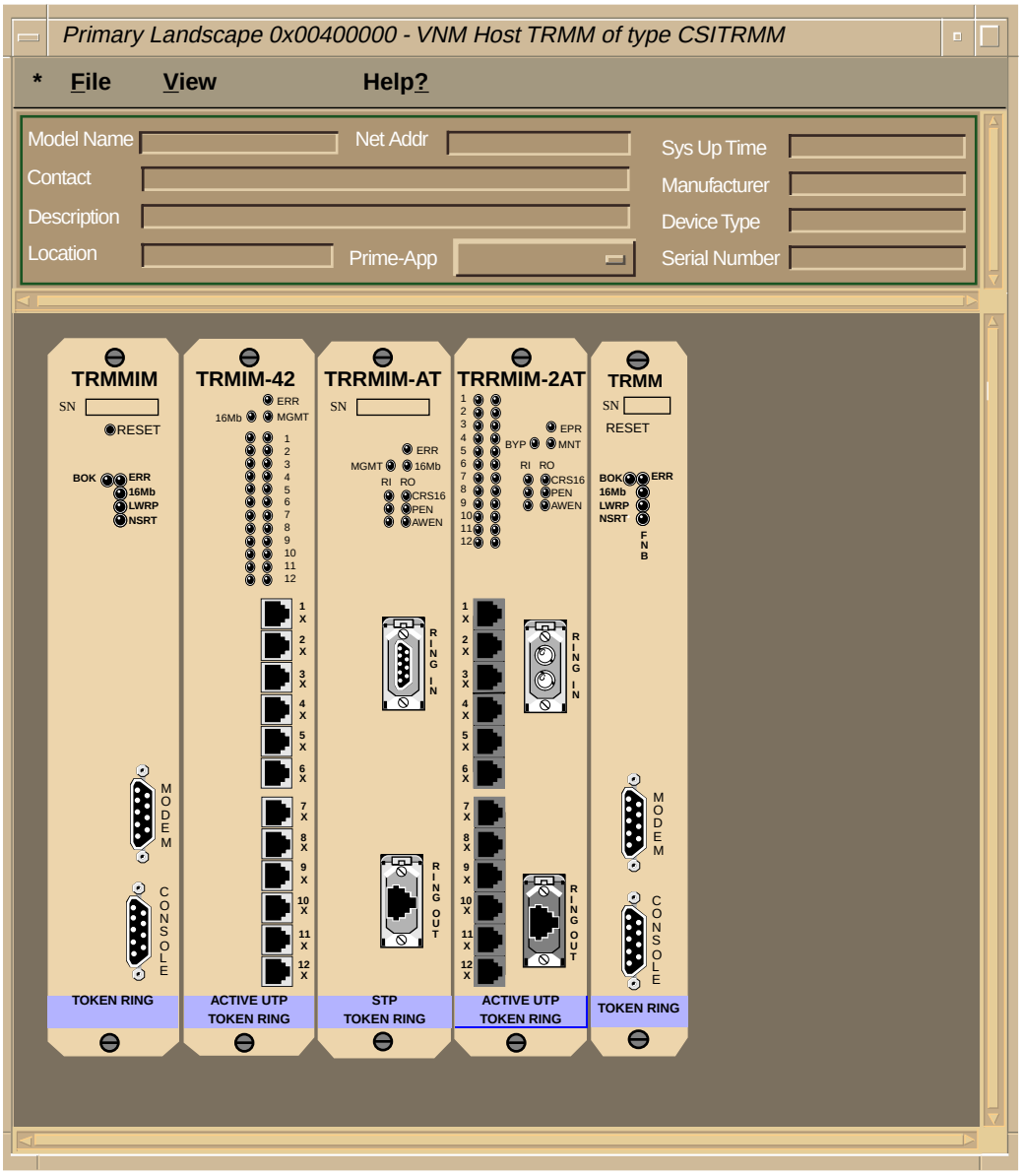
Physical Device View

The Physical Device view provides a graphical representation of the TRMM/ TRMMIM and the modules being managed within the chassis as shown in Figure .

Accessing the Physical Device View

Access the Physical Device view by using one of the methods described in the beginning of this chapter. Figure 2-6 provides an example of a TRMM/ TRMMIM Physical Device view.

Figure 2-6. Physical Device View



Chapter 3

Configuration Views

What Is in This Chapter

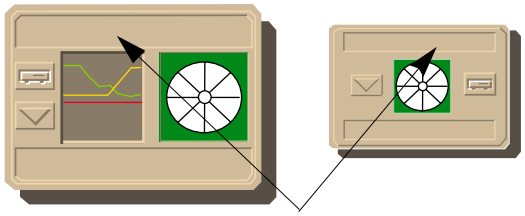
This chapter provides general descriptions of the configuration views that are available for the TRMM/TRMMIM. These views allow you to access device-specific configuration information. The TRMM/TRMMIM model type supports the following configuration views:

- Device Configuration view
- Station Port Configuration view
- Ring Port Configuration view
- Token Ring Configuration view
- Security Configuration view
- Token Ring Ring Configuration view
- Module Configuration view

Accessing the Device Configuration View

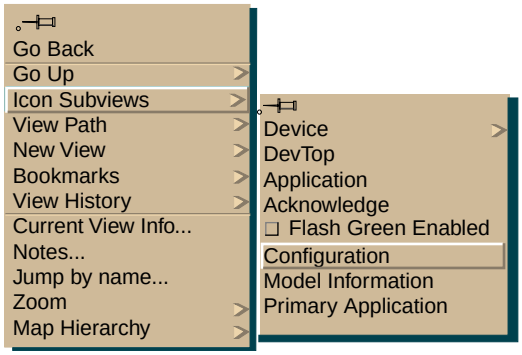
Access the Device Configuration view using one of the following methods:

- Double-click on the Device Configuration view label of the TRMM/TRMMIM device icon.



Device Configuration View Label

- Highligh the device icon and select Configuration from the Icon Subviews menu.



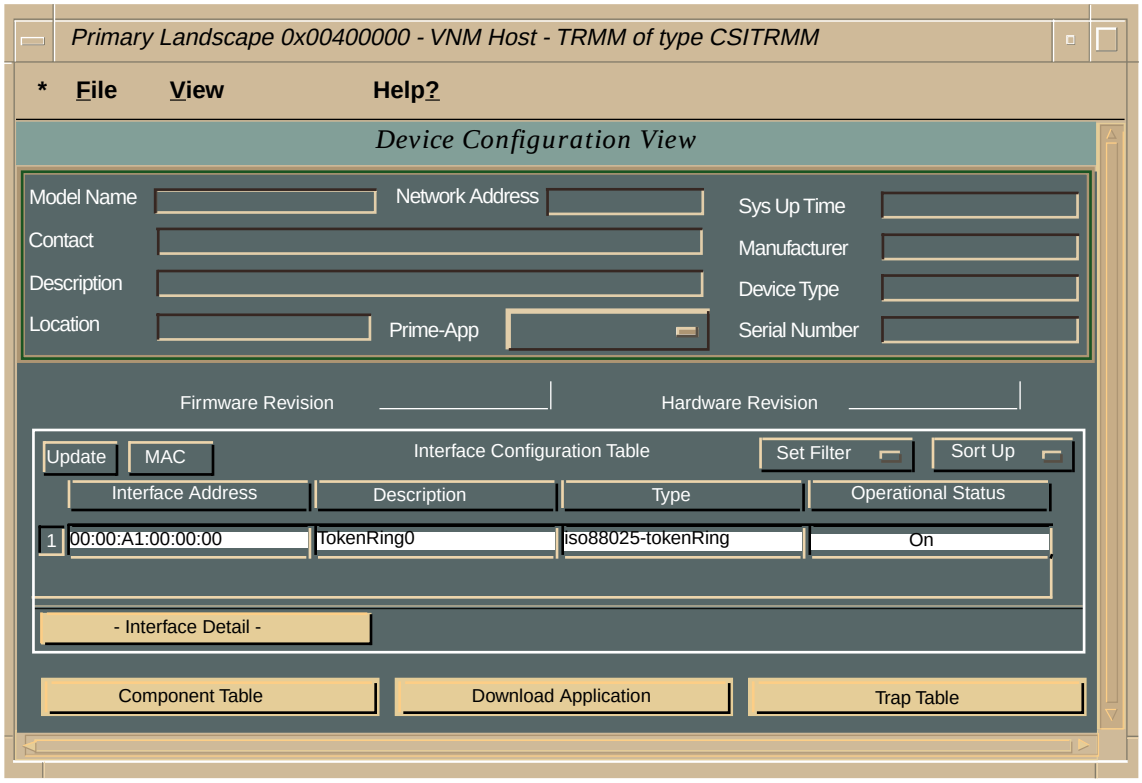
Device Configuration View

The Device Configuration view (Figure 3-1) provides information on the configuration of the TRMM/TRMMIM and allows you to modify the values of some fields figure. This view provides the following information:

Firmware Revision
The firmware revision for the device being modeled.

Hardware Revision
The hardware revision for the device being modeled.

Figure 3-1. Device Configuration View



Interface Configuration Table

This section of the Device Configuration view provides the following information pertaining to the configuration of the interface ports:

Update

This button updates the contents of the Device Configuration view.

MAC/Canonical

This button affects the display of the station addresses, toggling the format between MAC (Physical) and Canonical (Ethernet). The button displays the format NOT currently selected.

SetFilter

This button allows you to sort the interfaces/stations displayed in the table. You select an attribute to sort on by clicking one of the column heading buttons.

Sort Up/Sort Down/Un-Sort

This button allows you to sort the interfaces/stations displayed in the table. You select an attribute to sort on by clicking one of the column heading buttons.

Interface Address
Displays the interface address.

Description
Displays the description of the interface configuration.

Type
The type of hardware interface for the port. Possible types and a brief description of each are shown in Table 3-1.

Table 3-1. Port Interface Types

Interface Type	Description
Other	None of the following
Reg1822	Regular 1822
HDH1822	HDLC Distant Host protocol
DDNX25	Defense Data Network X.25
rfc877X25	RFC877 X.25
Ethernet	Ethernet CSMA/CD
iso88023	ISO CSMA/CD
iso88024	ISO token bus
iso88025	ISO token ring
iso88026	ISO man
starLan	StarLAN IEEE 802.3
Prot10MB	ProNET 10 Mbps
Prot80MB	ProNET 80 Mbps
HyChan	Hyperchannel
FDDI	Fiber Distributed Data Interface
LAPB	X.25 Line Access Procedure, Balanced
SDLC	IBM Synchronous Data Link Control protocol

Table 3-1. Port Interface Types (Continued)

Interface Type	Description
T1	T1 link (USA and Japan)
CEPT	T1 link (Europe)
BasicISDN	Basic Integrated Services Digital Network
PrimISDN	Proprietary Integrated Services Digital Network
PPSerial	Proprietary Point to Point Serial
PPP	Point to Point Protocol
SFTWARLPBK	Software Loopback
CLNPoverIP	Connectionless Network Protocol over IP
Enet3MB	Ethernet 3 Mbps
XNSoverIP	Xerox Network Service Protocol over IP
SLIP	Generic Serial Line IP
ULTRA	ULTRA Technologies
T-3	T3 link
SMDS	Switched Multimegabit Data Service
FrameRelay	T1 Frame relay

Operational Status
Displays the current operational status of this port (On, Off, or Testing).

Interface Detail

This button opens the Interface Detail view. Table 3-2 displays the information provided by the Interface Detail view.

Table 3-2. Interface Detail Field Definitions

Statistic	Definition
Interface Number	Displays the number of interfaces available from this device.
Interface Address	The Ethernet (MAC) address of the port.
Type	The type of hardware interface for the port. Possible types and a brief description of each type are show in Table 3-1.
Admin Status	This On/Off toggle button allows you to turn on or off the administrative status.
Interface Last Change	Displays the last date the interface was changed.

Component Table

This button opens the Component Table view. This view is an SPMA view and is described in the *SPECTRUM Portable Management Application for the TRMM User's Guide* and the *SPECTRUM Portable Management Application for the TRMMIM User's Guide.*

Download Application

This button opens the TFTP Download View. This view is an SPMA view and is described in the *SPECTRUM Portable Management Application for the TRMM User's Guide* and the *SPECTRUM Portable Management Application for the TRMMIM User's Guide.*

Trap Table

This button opens the Trap Table View. This view is an SPMA view and is described in the *SPECTRUM Portable Management Application for the TRMM User's Guide* and the *SPECTRUM Portable Management Application for the TRMMIM User's Guide.*

Station Port Configuration View

You can access this view by selecting Port Configuration from the Icon Subviews menu for the Station Port icon in the Device and DevTop views. You can modify some values in this view. The Station Port Confirguration view provides the following information:

Module
The number of the module this station port is on.

Port
The number of this station port.

Port Admin State
This button allows you to set the state of this station port as Enabled or Disabled.

Port Status
The status of this station port.

Port Speed Fault
Displays the media fault status of a token ring port capable of auto-wrapping. If auto-wrapping is not available, Not Supported will be displayed.

Set Station to RingOut
This button allows you to change a station port into a ring out port.

Port Link Status
The status of the station port link. This value will only be Linked if the station port detects a good phantom current.

Last Port Link Time
The time elapsed since the last station port link status change.

Port Insertion Trap
This button allows you to configure this station port to generate a trap when a port is inserted or removed. Possible values are Enabled or Disabled.

Ring Port Configuration View

You can access this view by selecting Port Configuration from the Icon Subviews menu for the Ring In and Ring Out icons in the Logical Device and DevTop views. You can modify some values in this view. The view provides the following information:

Module
The number of the module this ring port is on.

Port
The number of this ring port.

Port Admin State

This button allows you to set the ring port to be Enabled or Disabled.

Port Status
The status of this ring port.

Port Speed Fault
Displays the media fault status of a token ring port capable of AutoWrapping. If AutoWrapping is not available, Not Supported will be displayed.

Set Station to RingOut
This button allows you to set a station port to a ring out port.

Port Class
Indicates whether this ring port has AutoWrapping capability.

Port Media Select
This button allows you to select the port medium used for this ring port as either NotSelectable, STP, or Fiber.

Port Fault Status
The medium fault status for this ring port.

Last Port Fault Change
The time elapsed since the last port fault.

Port Phantom Current
This button allows you to set the phantom current for this ring port as either Activated or Deactivated. A value of NotAvailable indicates the device does not support this option.

Token Ring Configuration View

The Token Ring Configuration view provides information on the configuration of the TRMM/TRMMIM and allows you to modify the values of some fields. You can access this view from the Application view by clicking on the CtTokenRingApp icon and selecting Configuration from the Icon Subviews menu. This view provides the following information:

Ring Name
The ASCII name assigned to this ring. This name defaults to *Network n*, where *n* is a unique integer value.

Ring Number
The number of the attached ring. If SPECTRUM cannot determine the number of the ring, a zero is displayed.

Ring Speed
The speed of the ring, which can have a value of 4 or 16 megabits.

Ring Status
The operational state of the ring.

Ring Configuration

This button opens the Ring Configuration view, which is described later in this chapter.

Ring Security

This button opens the Security Configuration view, which is described later in this chapter.

Alarms Table

This button opens the Station Alarm Thresholds Table view, which is described later in this chapter.

Port Configuration

This section of the Token Ring Configuration view provides the following information pertaining to the configuration of the device ports:

Station Ports ON Out Of
Defines the total number of enabled station ports on this module.

Ring Ports ON Out Of
The total number of enabled ring in/ring out ports in this port group.

Enable All Station Ports
This button allows you to enable all the station ports in this port group by setting the value to Enable. The default value is NoEnable.

Enable All Ring Ports
This button allows you to enable all the ring ports in this port group by setting the value to Enable. The default value is NoEnable.

Host Configuration

This section of the Token Ring Configuration view provides the following information pertaining to the configuration of the host:

Commands

This button allows you to send commands to the device by setting the correct value. Possible commands are HardwareReset, SoftwareReset, Open, and Close. The default value is NoOperation.

Open Status
The status of the device with respect to insertion into the ring.

Error Report Timer
The time interval in which the host adapter reports errors to the ring error monitor.

Active Monitor Contention

This button allows you to set or prohibit the possibility of the TRMM/TRMMIM becoming the active monitor for the ring by setting the proper Allowed or NotAllowed status.

Host Error Status

This box in the Host Configuration section provides a series of read-only indicator buttons detailing the last error status returned by the TRMM/TRMMIM. For information on the errors displayed, why they occurred, or how to rectify them, refer to the *TRMM/TRMMIM Intelligent Hub User's Manual*.

Security Configuration View

You can access this view by clicking the Ring Security button in the Token Ring Configuration view. The Security Configuration view provides information on the security configuration for the ring and allows you to modify the values of some fields. This view provides the following information:

Ring Name
The ASCII name assigned to this ring. This name defaults to *Network n*, where *n* is a unique integer value.

Ring Number
The number of the attached ring. If SPECTRUM cannot determine the number of the ring, a zero is displayed.

Ring Speed
The speed of the ring, which can have a value of 4 or 16 megabits.

Ring Status
The operational state of the ring.

Administration State

This button allows you to select the security administration state for the TRMM/TRMMIM. A state of EnabledWithAlarms causes SPECTRUM to generate an alarm upon insertion of an illegal station into the ring. A state of EnabledWithRemoveAndAlarm generates an alarm and also removes the illegal station from the ring. Selecting Disabled turns off security for the TRMM/TRMMIM.

Total Allowed Stations
The total number of stations in the *Allowed Stations* list.

Allowed Station Address Table
This table contains a list of addresses and interface numbers for the stations allowed on the ring. The active monitor for the ring is indicated by an asterisk (*) beside the address. Double-clicking on a table entry opens the Modify Allowed Station List view, described later in this section. This table has the following buttons:

Update

Updates the contents of the Station Address table.

MAC/Canonical

Affects the display of the station addresses, toggling the format between MAC (Physical) and Canonical (Ethernet). The button displays the format NOT currently selected.

Set/Clear Filter

Allows you to set a filter to specify which stations are displayed in the table. You select an attribute to filter against by clicking one of the column heading buttons.

Sort Up/Sort Down/Un-Sort

Allows you to sort the stations displayed in the table. You select an attribute to sort on by clicking one of the column heading buttons.

Modify Allowed Station List

Opens the Modify Allowed Station List view, which is described later in this chapter.

Token Ring Ring Configuration View

You can access this view by clicking the Ring Configuration button in the Token Ring Configuration view. You can modify the values of some fields in this view.

Ring Configuration

This section of the Ring Configuration view displays the following information:

Ring Name
The ASCII name assigned to this ring. This name defaults to *Network n*, where *n* is a unique integer value.

Ring Number
The number of the attached ring. If SPECTRUM cannot determine the number of the ring, a zero is displayed.

Ring Speed
The speed of the ring, which can have a value of 4 or 16 megabits.

Ring Status
The operational state of the ring.

Active Monitor
The MAC address of the active monitor for the ring. This address will appear in any tables with an asterisk (*) to identify it.

Active Stations
The number of active stations currently inserted on the ring.

Beacon Recovery

This button allows you to Enable or Disable automatic beacon recovery for the TRMM/TRMMIM. When Disabled, the TRMM/TRMMIM will not attempt to reinsert itself into the ring after entering a beaconing state. If the device does not support automatic beacon recovery, SPECTRUM will display a status of Invalid.

Ring Alarm/Threshold/State

This section of the Ring Configuration view has three columns that display information on the ring alarms, their current thresholds, and their states (Enabled or Disabled). The threshold field allows you to set a value for the following ring alarms:

- Ring Purges
- AMP Errors
- Claim Token Errors
- Lost Frames
- Token Errors
- Beacon State
- Frame Count

One final field in this view, Ring Timebase, allows you to set the interval for getting and setting all alarms for this ring. This value is measured in seconds.

Module Configuration View

You can access this view from the Logical Device view by clicking on one of the managed module icons and selecting Module Configuration from the Icon Subviews menu. This view notifies you if someone has logged into your ports at an incorrect speed and provides the following information:

Module
The number of the module this ring port is on.

Module Name
Provides a descriptive name of the module.

Module Mode
Displays the mode, Management, Auto or Unknown.

Module Ring Speed
Displays the speed at which the module is configured to operate.

Module Speed Fault
Displays the ring speed fault on the module, if applicable. If the module cannot detect the speed faults, then the value NotSupported is displayed.

Module Speed Fault Location
Displays the last ring speed fault detection circuits to detect the fault, if there was one. On modules where the speed fault cannot be detected, the value NotApplicable is displayed.

Module Port Configuration

This section of the Module Configuration view allows you to enable/disable ports and displays the number of enabled ports.

Station Ports On Out Of
The total number of enabled station ports on the addressed module.

Ring Ports On Out Of
The total number of enabled ring in/ring out ports in this port group.

Ports Operational Out Of
The total number of operational ports on the addressed module.

Enable All Station Ports
This button allows you to enable all the station ports in this port group by setting the value to Enable. The default value is NoEnable.

Enable All Ring Ports
This button allows you to enable all the ring ports in this port group by setting the value to Enable. The default value is NoEnable.

Enable All Module Ports
This button allows you to enable all the module ports in this port group by setting the value to Enable. The default value is NoEnable.

Cabletron Token Ring Station Table View

This view displays a Station Table containing information for all stations directly connected to the TRMM/TRMMIM device, buttons to manipulate the information in the table, and buttons to access other views. You can access this view from the Logical Device view by clicking on the TRMM/TRMMIM module icon and selecting Stations from the Icon Subviews menu. This view provides the following information and buttons:

Ring Name
The ASCII name assigned to this ring. This name defaults to *Network n*, where *n* is a unique integer value.

Ring Number
The number of the attached ring. If SPECTRUM cannot determine the number of the ring, a zero is displayed.

Ring Speed
The speed of the ring, which can have a value of 4 or 16 megabits.

Ring Status
The operational state of the ring.

Active Monitor
The MAC address of the active monitor for the ring. This address will appear in any tables with an asterisk (*) to identify it.

Isolating Errors Table

This button opens the Station Isolating Errors view, which is described later in this chapter.

Alarms Table

This button opens the Station Alarm Thresholds view, which is described later in this chapter.

Update

This button updates the contents of the Station Table.

Totals/Deltas

This button allows you to display two types of statistical information. Selecting Totals displays the statistics as totals since the TRMM/TRMMIM was initialized. Selecting Deltas displays the difference between the current value and the value at the time of the last update. The button displays the format currently selected.

MAC/Canonical

This button allows you to display two types of station addresses, toggling the format between MAC (Physical) and Canonical (Ethernet). The button displays the format NOT currently selected.

Set/Clear Filter

This button allows you to set a filter affecting the stations displayed in the table. You select an attribute to filter against by clicking one of the column heading buttons.

Sort Up/Sort Down/Un-Sort

This button allows you to sort the stations displayed in the table. You select an attribute to sort on by clicking one of the column heading buttons.

Station Address
The MAC address of the station to which this information pertains.

Station Name
The ASCII name assigned to this station.

Frames
The total number of frames that have been received/generated by this station.

Errors
The total number of errors that this station has detected on the ring.

Module
The slot number of the token ring module to which this station is connected.

Port
The number of the port on the token ring module to which this station is connected.

Station Detail

This button opens the Station Detail View, which is described later in this chapter.

Station Alarms

This button opens the Station Alarms dialog box, which is described later in this chapter.

Remove Station

This button allows you to remove the selected station from the ring.

802.5 Station Table View

This view displays a Station Table containing information for all stations on the ring, buttons to manipulate the information in the table, and buttons to access other views. The station that is the active monitor will be marked (*) to distinguish it from the other stations in the list. You can access this view by clicking on the Detail button in the Performance view for the LAN_802_5 model containing the TRMM/TRMMIM, if the TRMM/TRMMIM within the LAN is the monitoring point. The information displayed by this view is much the same as the Cabletron Token Ring Station Table view, providing the following information and buttons:

Update

This button updates the contents of the Station Table.

Totals/Deltas

This button affects the display of statistical information. Selecting Totals displays the statistics as totals since the TRMM/TRMMIM was initialized. Selecting Deltas displays the difference between the current value and the value at the time of the last update. The button displays the format currently selected.

MAC/Canonical

This button affects the display of the station addresses, toggling the format between MAC (Physical) and Canonical (Ethernet). The button displays the format NOT currently selected.

Set/Clear Filter

This button allows you to set a filter affecting the stations displayed in the table. You select an attribute to filter against by clicking one of the column heading buttons.

Sort Up/Sort Down/Un-Sort

This button allows you to sort the stations displayed in the table. You select an attribute to sort the table with by clicking one of the column heading buttons.

Station Address
The MAC address of the station to which this information pertains.

Station Name
The ASCII name assigned to this station.

Frames
The total number of frames that have been received/generated by this station.

Errors
The total number of errors that this station has detected on the ring.

Station Detail

This button opens the Station Detail vview, which is described later in this chapter.

Station Alarms

This button opens the Station Alarms dialog box, which is described later in this chapter.

Isolating Errors

This button opens the 802.5 Station Isolating Errors view, providing the same information and button functions as the Station Isolating Errors vview described later in this chapter.

Configuration

This button opens the 802.5 Configuration view, which provides the same information and button functions as the TRMM/TRMMIM Token Ring Configuration view described earlier in this chapter.

Token Ring Isolating Errors View

You can access this view by clicking on the Isolating Errors Table button in the Token Ring Station Table view. This table displays an Isolating Errors Table containing information for all stations directly connected to the TRMM/TRMMIM device. The table provides the following information and buttons:

Ring Name
The ASCII name assigned to this ring. This name defaults to *Network n*, where *n* is a unique integer value.

Ring Number
The number of the attached ring. If SPECTRUM cannot determine the number of the ring, a zero is displayed.

Ring Speed
The speed of the ring, which can have a value of 4 or 16 megabits.

Ring Status
The operational state of the ring.

Active Monitor
The MAC address of the active monitor for the ring. This address will appear in any tables with an asterisk (*) to identify it.

Non-Isolating Errors

This button opens the Station Non-Isolating Errors view, which is described later in this chapter.

Alarms Table

This button opens the Station Alarm Thresholds view, which is described later in this chapter.

Update

This button updates the contents of the Station Isolating Errors Table.

Totals/Deltas

This button affects the display of statistical information. Selecting Totals displays the statistics as totals since the TRMM/TRMMIM was initialized. Selecting Deltas displays the difference between the current value and the value at the time of the last update. The button displays the format currently selected.

MAC/Canonical

This button affects the display of the station addresses, toggling the format between MAC (Physical) and Canonical (Ethernet). The button displays the format NOT currently selected.

Set/Clear Filter

This button allows you to set a filter affecting the stations displayed in the table. You select an attribute to filter against by clicking one of the column heading buttons.

Sort Up/Sort Down/Un-Sort

This button allows you to sort the stations displayed in the table. You select an attribute to sort the table with by clicking one of the column heading buttons.

Station Address
The MAC address of the station to which this information pertains.

Station Name
The ASCII name assigned to this station.

Line
The number of line errors that this station has detected on the ring.

Burst
The number of burst errors that this station has detected on the ring.

A/C
The number of address/copied errors that this station has detected on the ring.

Abort
The number of abort sequences that this station has sent.

Internal
The number of internal errors that this station has detected.

Station Detail

This button opens the Station Detail view, which is described later in this chapter.

Station Alarms

This button opens the Station Alarms dialog box, which is described later in this chapter.

Remove Station

This button allows you to remove the selected station from the ring.

Token Ring Non-Isolating Errors View

You can access this view by clicking on the Non-Isolating Errors Table button in the Token Ring Station Isolating Errors view. This view displays a Non-Isolating Errors Table containing information for all stations directly connected to the TRMM/TRMMIM device. The table provides the following information and buttons:

Ring Name
The ASCII name assigned to this ring. This name defaults to *Network n*, where *n* is a unique integer value.

Ring Number
The number of the attached ring. If SPECTRUM cannot determine the number of the ring, a zero is displayed.

Ring Speed
The speed of the ring, which can have a value of 4 or 16 megabits.

Ring Status
The operational state of the ring.

Active Monitor
The MAC address of the active monitor for the ring. This address will appear in any tables with an asterisk (*) to identify it.

Alarms Table

This button opens the Station Alarm Thresholds view, which is described later in this chapter.

Update

This button updates the contents of the Station Non-Isolating Errors Table.

Totals/Deltas

This button affects the display of statistical information. Selecting Totals displays the statistics as totals since the TRXI was initialized. Selecting Deltas displays the difference between the current value and the value at the time of the last update. The button displays the format currently selected.

MAC/Canonical

This button affects the display of the station addresses, toggling the format between MAC (Physical) and Canonical (Ethernet). The button displays the format NOT currently selected.

Set/Clear Filter

This button allows you to set a filter affecting the stations displayed in the table. You select an attribute to filter against by clicking one of the column heading buttons.

Sort Up/Sort Down/Un-Sort

This button allows you to sort the stations displayed in the table. You select an attribute to sort the table with by clicking one of the column heading buttons.

Station Address
The MAC address of the station to which this information pertains.

Station Name
The ASCII name assigned to this station.

LostFrames
The number of lost frames that this station has detected on the ring.

Congestions
The number of congestion errors that have occurred at this station.

FrameCopied
The number of frame copied errors that this station has detected on the ring.

Token
The number of token errors that this station has detected on the ring while it was acting as the active monitor.

Frequency
The number of frequency errors that this station has detected on the ring.

Station Detail

This button opens the Station Detail view, which is described later in this chapter.

Station Alarms

This button opens the Station Alarms dialog box, which is described later in this chapter.

Remove Station

This button allows you to remove the selected station from the ring.

Station Alarm Thresholds View

You can access this view by clicking on the Alarms Table button in the 802.5 Station Isolating Errors view. This view displays a Station Alarm Thresholds Table containing information for all stations directly connected to the TRMM/TRMMIM device, buttons to manipulate the information in the table, and buttons to access other views. This view displays the following information:

Ring Name
The ASCII name assigned to this ring. This name defaults to *Network n*, where *n* is a unique integer value.

Ring Number
The number of the attached ring. If SPECTRUM cannot determine the number of the ring, a zero is returned.

Ring Speed
The speed of the ring, which can have a value of 4 or 16 megabits.

Ring Status
The operational state of the ring.

Active Monitor
The MAC address of the active monitor for the ring. This address will appear in any tables with an asterisk (*) to identify it.

Alarm States Table

This button opens the Station Alarm States Table view, which provides the same button functions and fields as the Alarms Thresholds view, but displays information on the state of each alarm threshold (Enabled or Disabled).

Update

This button updates the contents of the Station Alarm Thresholds Table.

MAC/Canonical

This button affects the display of the station addresses, toggling the format between MAC (Physical) and Canonical (Ethernet). The button displays the format NOT currently selected.

Set/Clear Filter

This button allows you to set a filter affecting the stations displayed in the table. You select an attribute to filter against by clicking one of the column heading buttons.

Sort Up/Sort Down/Un-Sort

This button allows you to sort the stations displayed in the table. You select an attribute to sort the table with by clicking one of the column heading buttons.

Station Address
The MAC address of the station to which this information pertains.

Station Name
The ASCII name assigned to this station.

Line
The current alarm threshold setting for line errors on the device.

Burst
The current alarm threshold setting for burst errors on the device.

A/C
The current alarm threshold setting for address/copied errors on the device.

Internal
The current alarm threshold setting for internal errors on the device.

Congestions
The current alarm threshold setting for congestion errors on the device.

Station Detail

This button opens the Station Detail view, which is described later in this chapter.

Station Alarms

This button opens the Station Alarms dialog box, which is described later in this chapter.

Remove Station

This button allows you to remove the selected station from the ring.

Station Detail View

You can access this view by clicking on the Station Detail button in the Token Ring Station Table view. The Station Detail view provides detailed information on the selected station. This view includes three color-coded pie charts presenting a breakdown of Token Ring application statistics. Each statistic is presented as a total amount since the TRMM/TRMMIM was initialized and as a percentage of overall traffic. Three buttons at the bottom of each pie chart select the way in which the data is represented (Total, Delta, and Accum). Another button, Clear, works in conjunction with the Accum button. For more information on these buttons refer to the *SPECTRUM GIB Editor Guide*. Table 3-3 through Table 3-5 provide information on the statistics displayed by each chart. This view also provides the following information:

Station Address
The MAC address of the station to which the information in this table pertains.

Station Name
The ASCII name assigned to this station.

Station Module
The slot number of the token ring module to which this station is connected.

Station Port
The number of the port on the token ring module to which this station is connected.

Upstream
The MAC address of the device (neighbor) immediately upstream of the TRMM/TRMMIM on the ring.

Downstream
The MAC address of the device (neighbor) immediately downstream of the TRMM/TRMMIM on the ring.

Configure Station Alarms

This button opens the Station Alarms Configuration View, which allows you to change the threshold value and state on the station for the Line, Burst, A/C, Internal, and Receive Congestion errors.

Station Removal

This button allows you to modify the removal state of the station and displays the last request made of the device. Remove causes the station to remove itself from the ring, NotRemovable disables removal from the ring, and DoNotRemove is the default setting and does not affect the station.

Station Priority
The station's maximum access priority.

Table 3-3. Frame Breakdown Pie Chart

Statistic	Definition
Frames	The total number of frames detected on this station or ring.
Errors	The total number of errors detected by this station or ring.

Table 3-4. Isolating Errors Pie Chart

Statistic	Definition
Line	The total number of line errors that have occurred on this ring.
Burst	The total number of burst errors that have occurred on this ring.
A/C	The total number of address/copied errors that have occurred on this ring.
Abort Sequence	The total number of abort sequences transmitted on this ring.
Internal	The total number of internal errors detected by station on this ring.

Table 3-5. Non-Isolating Errors Pie Chart

Statistic	Definition
Lost Frames	The total number of times a station has had its TRR timer expire while trying to transmit.
Congestions	The total number of times a station recognizes a frame addressed to it, but has no available buffer space.
Frame Copied	The total number of times a station recognizes a frame addressed to it, and detects that the FS field A bits are set to 1.
Token	The total number of times the station acting as active monitor recognizes an error condition requiring a token be transmitted.
Frequency	The total number of frequency errors on this ring.

Station Alarms Dialog Box

You can access this dialog box by clicking on the Station Alarms button in the Token Ring Station Table view. The Station Alarms dialog box allows you to read, display, and modify the alarm settings for a single station or list of stations. The list displays the stations that were on the ring at the time the dialog box was opened. You can read and modify the settings to a valid station that does not appear in the list and was added after opening the view by entering its address in the Station field. The Station Alarms dialog box provides the following information:

Station
Address of the current station. You can enter the address of a valid station in this field to make it the current station.

Alarm
Threshold alarms that can be manipulated. The alarms in this column include Line, Internal, Burst, A/C, and Congestion.

Threshold
Current setting for each corresponding alarm threshold. You can change the values by selecting the field and editing the number.

State
State of each corresponding alarm threshold (Enable or Disabled).

Stations
Lists the MAC addresses of all stations in the ring at the time the dialog box was opened, except the current station, which is displayed in the Apply Settings to list. Double-clicking on an address in the Station list moves it to the Apply Settings to list.

Apply Settings to
Lists the MAC addresses of all stations to which the threshold settings apply. This list will always contain the current station's MAC address upon opening the dialog box. Double-clicking on an address in the Apply Settings to list moves it to the Stations list.

>

This button moves the selected item from the Stations list to the Apply Settings to list.

<

This button moves the selected item from the Apply Settings to list to the Stations list.

>>

This button moves all of the stations from the Stations list to the Apply Settings to list. The current station remains at the top of the Apply Settings to list if it is a valid station.

<<

This button moves all of the stations from the Apply Settings to list to the Stations list. The current station remains at the top of the Apply Settings to list if it is a valid station.

Apply

This button applies the threshold settings to the stations listed in the Apply Settings to list, or to the station entered into the Station field if the list is empty.

Read

This button initiates a read of the threshold settings for the selected station, or for the station entered into the Station field.

Cancel

This button exits the dialog box without applying settings to the stations, or once you have applied all changes and wish to exit.

Modify Allowed Station List Dialog Box

The Modify Allowed Station List Dialog Box allows you to do the following:

- Choose the level of security for the ring
- Display the list of stations currently allowed on the ring
- Store addresses currently disallowed on the ring in a buffer, enabling you to move the addresses to the Allowed Stations window in the future.

Access the Modify Allowed Station List Dialog Box as follows:

1. Highlight the TRMM/TRMMIM device icon and select Application from the Icon Subviews menu.
2. In the Application view, highlight the CtTokenRingApp icon and select Configuration. This will open the Cabletron Token Ring Configuration view.
3. In the Cabletron Token Ring Configuration view, click on the Ring Security button. This will open the Cabletron Token Ring Security Configuration view.
4. In the Cabletron Token Ring Security Configuration view, click on the Modify Allowed Station List button. This will open the Modify Allowed Station List Dialog Box.

Do not attempt to modify Ring Security without a complete understanding of Token Ring concepts and the TRMM/TRMMIM device. Removal of the station acting as the connecting bridge from the Ring Security Allowed Station List can cause isolation from the ring.

Security Administration State

This section of the Modify Allowed Station List Dialog Box allows you to choose the level of security for the ring. You may only select one option at a time. Click on the desired option to select it.

Disable
Disables ring security. All stations are allowed on the ring.

Enable with Alarm
Enables ring security. Any station entering the ring will generate an alarm unless it is on the Allowed Station Address list in the Cabletron Token Ring Security Configuration view. The device will place the station address on the Allowed Stations list.

Enable with Remove and Alarm
Enables ring security. Any station not on the Allowed Station Address list in the Cabletron Token Ring Security Configuration view that enters or currently resides on the ring will generate an alarm and be removed from the ring.

Allowed Stations

This section of the Modify Allowed Station List Dialog Box displays the list of stations currently allowed on the ring. Double-clicking on an item in the list will move it to the Disallowed Stations window. However, you cannot move a station from the Allowed Stations window if the security is set to Enable with Alarm. A symbol (>) next to the station indicates that it has recently been moved to the Disallowed Stations window.

Disallowed Stations

This section of the Modify Allowed Station List Dialog Box stores addresses currently disallowed on the ring so that you can move them to the Allowed Stations window in the future. The ring denies access to all stations not explicitly listed in the Allowed Stations window. Double-clicking on an item in the list will move it to the Allowed Stations window. A symbol (<) next to the station indicates that it has recently been moved to the Allowed Stations window.

This button will move the selected station from the Allowed Stations window to the Disallowed Stations window. A symbol (>) next to the station indicates that it has recently been moved to the Disallowed Stations window. You cannot move a station from the Allowed Stations window if the security is set to Enable with Alarm.

<

This button will move the selected station from the Disallowed Stations window to the Allowed Stations window. A symbol (<) next to the station indicates that it has recently been moved to the Allowed Stations window.

ADD

This button displays another dialog box that allows you to add a new station. The station address must be added in valid hex MAC address form: Valid separators are the colon (:), period (.), and dash (-). You can add the new station to either the Allowed or Disallowed Station window by selecting the appropriate option in the Add Station to List dialog box. A symbol (+) next to the station indicates that it has recently been added.

DELETE

This button allows you to remove the selected station (*Refer to the CAUTION earlier in this section*). You may remove any station address except that belonging to the device itself, or a station from the Allowed Stations window if the security is set to Enable with Alarm. A symbol (-) next to the station indicates that it has been marked for removal, and will remain until the changes are applied. Selecting the station and clicking on the ADD button will remove the symbol (-) and unmark the station for removal.

Delete All Allowed Stations

This button allows you to remove all of the stations in the Allowed Stations window (*Refer to the CAUTION earlier in this section*). A symbol (-) next to the station marks all of the items in the window, indicating that the stations have been designated for removal, and will remain until the changes are applied, at which time the stations are actually removed from the window. This option will remove all station addresses except that belonging to the device itself. Selecting a station and clicking on the ADD button will remove the symbol (-) and unmark that station for removal.

Apply

This button applies all changes made to the Allowed and Disallowed Stations windows, writing the list from the Allowed Stations window to the device and from the Disallowed Stations window to SPECTRUM. All indicator markings are removed from the windows.

Read

This button displays the previously set values for both the device and SPECTRUM in the Allowed and Disallowed Stations windows. This serves to reset any changes you made to either window but did not apply.

Cancel

This button will exit you from the view. Only changes that have been applied will be saved.

Chapter 4

Event and Alarm Messages

What Is in This Chapter

This chapter describes the types of events and alarms generated by the TRMM/TRMMIM and any probable cause messages corresponding to these alarms.

TRMM/TRMMIM Events and Alarms

This table describes the event messages appearing in the Event Log, and any corresponding probable cause messages that may be displayed in the Enterprose Alarm Manager for the TRMM/TRMMIM.

Table 4-1. TRMM/TRMMIM Events and Alarms

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00010203 {d "%w- %d %m-, %Y - %T"} -The model created is not the same type as the device. Model type = {t}, Name = {m}, User = {u}. (event [{e}])	CsPCause/Prob00010203 The model created is not the same type as the device.
CsEvFormat/Event00010306 {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has been cold started. (event [{e}])	No probable cause message.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00010307 {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m},has been warm started. (event [{e}])	No probable cause message.
CsEvFormat/Event00010308 {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected a communication Link Down. (event [{e}])	CsPCause/Prob00010308 Communication link is down.
CsEvFormat/Event00010309 {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected a communication Link Up. (event [{e}])	No probable cause message.
CsEvFormat/Event0001030a {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected an Authentication Failure. (event [{e}])	CsPCause/Prob0001030a Authorization failure. Other user is trying to connect to device with an invalid community string.
CsEvFormat/Event0001030b {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected an EGP Neighbor Loss. EGP Neighbor IP address is {0 1}. (event [{e}])	CsPCause/Prob0001030b Lost contact with EGP neighbor.
CsEvFormat/Event00010401 {d "%w- %d %m-, %Y - %T"} - Device {m} of type {t} is created with an IP address already used by another model. (event [{e}])	CsPCause/Prob00010401 DUPLICATE IP ADDRESS: The model has the same IP address as that of some other model.
CsEvFormat/Event00010402 {d "%w- %d %m-, %Y - %T"} - Device {m} of type {t} is created with a physical (Mac) address already used by another model. (event [{e}])	CsPCause/Prob00010402 DUPLICATE PHYSICAL ADDRESS: The model has the same Physical address (Mac address) as that of some other model.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420107 {d "%w- %d %m-, %Y - %T"} - MODULE REMOVAL - Device {m} of type {t} reported that module {I 1} has been removed. (event [{e}])	CsPCause/Prob00420107 MODULE REMOVAL SYMPTOMS: A module within this chassis has been removed or has failed.
CsEvFormat/Event00420108 {d "%w- %d %m-, %Y - %T"} - MODULE INSERTION - Device {m} of type {t} reported that a module has been inserted into slot {I 1}. (event [{e}])	CsPCause/Prob00420108 MODULE INSERTION SYMPTOMS: A module has been inserted into this chassis.
CsEvFormat/Event00420119 {d "%w- %d %m-, %Y - %T"} - TEMPERATURE WARM - Device {m} of type {t} reported that the module {I 1} temperature is warm. (event [{e}])	CsPCause/Prob00420119 TEMPERATURE WARM SYMPTOMS: The module may be defective or a fan has failed in the chassis. RECOMMENDED ACTIONS: 1) Verify that module is not defective. 2) Check for fans failures in the chassis and repair as needed.
CsEvFormat/Event0042011a {d "%w- %d %m-, %Y - %T"} - TEMPERATURE HOT - Device {m} of type {t} reported that the module {I 1} temperature is hot. (event [{e}])	CsPCause/Prob0042011a TEMPERATURE HOT SYMPTOMS: A module may be defective or a fan has failed in the chassis. A serious heat condition is present and should be addressed immediately. RECOMMENDED ACTIONS: 1) Verify that module is not defective. 2) Check for fan failures in the chassis and repair as needed.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event0042011b {d "%w- %d %m-, %Y - %T"} - VOLTAGE LOW - Device {m} of type {t} reported that the slot {I 1} power supply voltage is low. (event [{e}])	CsPCause/Prob0042011b VOLTAGE LOW SYMPTOMS: The internal voltage of the power supply module is low. PROBABLE CAUSES: 1) The power supply unit is defective. 2) An AC power failure has occurred in the power supply. RECOMMENDED ACTIONS: 1) Check the power supply unit on device. 2) Check power source to device.
CsEvFormat/Event0042011c {d "%w- %d %m-, %Y - %T"} - TEMPERATURE NORMAL - Device {m} of type {t} reported that the module {I 1} temperature is normal. (event [{e}])	No probable cause message.
CsEvFormat/Event0042011d {d "%w- %d %m-, %Y - %T"} - VOLTAGE NORMAL - Device {m} of type {t} reported that the slot {I 1} power supplly voltage is normal. (event [{e}])	No probable cause message.
CsEvFormat/Event0042011e {d "%w- %d %m-, %Y - %T"} - FAN ABNORMAL - Device {m} of type {t} reported that a fan in the chassis has failed or is operating at an abnormal RPM rate. (event [{e}])	CsPCause/Prob0042011e FAN ABNORMAL SYMPTOMS: A problem has been detected with a cooling fan or the fan tray assembly for this device. RECOMMENDED ACTIONS: This failure should be addressed before overheating causes damage to the device. Check for fan failures in the chassis and repair as needed.
CsEvFormat/Event0042011f {d "%w- %d %m-, %Y - %T"} - FAN NORMAL - Device {m} of Type {t} reported that a fan in the chassis has resumed normal operation. (event [{e}])	No probable cause message.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420201 {d "%w- %d %m-, %Y - %T"} - PORT INSERTED - Device {m} of type {t} reported that a station has been inserted into port {I 1} in module {I 2}. (event [{e}])	No probable cause message.
CsEvFormat/Event00420202 {d "%w- %d %m-, %Y - %T"} - PORT DEINSERTED - Device {m} of type {t} reported that a station has been deinserted from port { I 1} in module {I 2}. (event [{e}])	No probable cause message.
CsEvFormat/Event00420203 {d "%w- %d %m-, %Y - %T"} - RING SPEED FAULT - Device {m} of type {t} reported that module {I 1} has entered the ring speed fault state. (event [{e}])	CsPCause/Prob00420203 RING SPEED FAULT SYMPTOMS: A token ring module has entered the ring speed fault state. PROBABLE CAUSES: 1) A station or ring port attaching with a different speed than this module is configured for. RECOMMENDED ACTIONS: 1) Detach the station or ring port from the module. 2) Re-configure the station or ring port speed to match the speed of the affected module. 3) Re-attach the station or ring port to the module.
CsEvFormat/Event00420204 {d "%w- %d %m-, %Y - %T"} - RING SPEED FAULT CLEARED - Device {m} of type {t} reported that module {I 1} has left the ring speed fault state. (event [{e}])	No probable cause message.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420205 {d "%w- %d %m-, %Y - %T"} - RING PORT FAULTED - Device {m} of type {t} reported that ring port {I 1} in module {I 2} has entered the wrapped state while its management state was enabled. (event [{e}])	CsPCause/Prob00420205 RING PORT FAULTED SYMPTOMS: A ring port has entered the wrapped state while its management state was enabled. PROBABLE CAUSES: 1) Bad cable connected to affected port. 2) Device is down at other end of the cable. 3) Device connection is bad at other end of the cable. RECOMMENDED ACTIONS: 1) Check cable connected to affected port. 2) Power up device at other end of the cable. 3) Check device connection at other end of the cable.
CsEvFormat/Event00420206 {d "%w- %d %m-, %Y - %T"} - RING PORT FAULT CLEARED - Device {m} of type {t} reported that ring port {I 1} in module {I 2} has left the wrapped state. (event [{e}])	No probable cause message.
CsEvFormat/Event00420207 {d "%w- %d %m-, %Y - %T"} - BEACON STATE - Device {m} of type {t} reported that station {T 2} attached to port {I 5} in module {I 4} has detected a beacon of type {T LstBcnType 1}. Its upstream neighbor station is {O 3}. (event [{e}])	CsPCause/Prob00420207 BEACON STATE SYMPTOMS: A station attached to this device has detected a new beacon on the ring while the ring was in operational state. PROBABLE CAUSES: 1) The cable between this station and its upstream neighbor. 2) The token ring card in the upstream neighbor station is bad. 3) This station's token ring card is bad. RECOMMENDED ACTIONS: 1) Check the cable between this station and its upstream neighbor. 2) Check the token ring card in the upstream neighbor station. 3) Check this station's token ring card.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420208 {d "%w- %d %m-, %Y - %T"} - BEACON STATE CLEARED - Device {m} of type {t} reported that the last beacon of type {T LstBcnType 1} has been cleared. (event [{e}])	No probable cause message.
CsEvFormat/Event00420209 {d "%w- %d %m-, %Y - %T"} - STATION ADDED - Device {m} of type {t} reported that station {T 1} has been added to the Allowed Station List. (event [{e}])	No probable cause message.
CsEvFormat/Event0042020a {d "%w- %d %m-, %Y - %T"} - STATION REMOVED - Device {m} of type {t} reported that station {T 1} has been removed from the Allowed Station List. (event [{e}])	No probable cause message.
CsEvFormat/Event0042020b {d "%w- %d %m-, %Y - %T"} - RING CONFIGURATION CHANGED - Device {m} of Type {t} reported that its ring configuration has changed. (event [{e}])	No probable cause message.
CsEvFormat/Event0042020c {d "%w- %d %m-, %Y - %T"} - PORT REMOVED DURING FAULT RECOVERY - Device {m} of type {t} reported that port {I 1} in module {I 2} was removed from the ring during a fault recovery condition. (event [{e}])	CsPCause/Prob0042020c PORT REMOVED DURING FAULT RECOVERY SYMPTOMS: A port was removed from the ring during a fault recovery condition. PROBABLE CAUSES: 1) Bad cable connected to removed port. 2) Device connection is bad at other end of the cable. RECOMMENDED ACTIONS: 1) Check cable connected to removed port. 2) Check device connection at other end of the cable. 3) After problem is resolved, enable the removed port.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event0042020d {d "%w- %d %m-, %Y - %T"} - BOARD BYPASSED DURING FAULT RECOVERY - Device {m} of type {t} reported that module {I 2} was bypassed during a fault recovery condition. (event [{e}])	CsPCause/Prob0042020d BOARD BYPASSED DURING FAULT RECOVERY SYMPTOMS: A module was bypassed during a fault recovery condition. PROBABLE CAUSES: 1) This module is configured with a different ring speed than the hub. RECOMMENDED ACTIONS: 1) Pull out the bypassed module from the hub. 2) Re-configure this module's ring speed to match that of the hub. 3) Physically insert the module back into the hub. 4) Set this module's bypass state to inserted.
CsEvFormat/Event0042020e {d "%w- %d %m-, %Y - %T"} - PORT VIOLATION - Device {m} of type {t} reported that port { I 1} in module {I 2} has detected a link while the port's management state was disabled. (event [{e}])	CsPCause/Prob0042020e PORT VIOLATION SYMPTOMS: A link has been detected for a port while its management state was disabled. PROBABLE CAUSES: 1) A physical connection has been made between a station and a port while the port's management state was disabled. RECOMMENDED ACTIONS: 1) If the station belongs on this ring, then enable the port's management state. 2) If the station does not belong on this ring, then physically disconnect the intruding station from the port.
CsEvFormat/Event0042020f {d "%w- %d %m-, %Y - %T"} - PORT VIOLATION CLEARED - Device {m} of type {t} reported that port { I 1} in module {I 2} has detected an unlink while the port's management state was disabled. (event [{e}])	No probable cause message.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420210 {d "%w- %d %m-, %Y - %T"} - FAULT RECOVERY OSCILLATION - Device {m} of type {t} reported that the ring is oscillating. (event [{e}])	CsPCause/Prob00420210 FAULT RECOVERY OSCILLATION SYMPTOMS: The ring is oscillating. Oscillation occurs when the ring fails a short time after recovery.
CsEvFormat/Event00420211 {d "%w- %d %m-, %Y - %T"} - RING PURGE THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring purge threshold value of {I 1} has been exceeded within the timebase value of {I 2}. (event [{e}])	CsPCause/Prob00420211 RING PURGE THRESHOLD EXCEEDED SYMPTOMS: The ring purge threshold value has been exceeded. A ring purge is used to make the ring return to a normal condition. PROBABLE CAUSE: An active monitor will initiate the ring purge process when: 1) A token error condition is detected by the active monitor. 2) An adapter becomes the active monitor in the monitor contention process.
CsEvFormat/Event00420212 {d "%w- %d %m-, %Y - %T"} - RING ACTIVE MONITOR ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring active monitor errors threshold value of {I 1} has been exceeded within the timebase value of {I 2}. (event [{e}])	CsPCause/Prob00420212 RING ACTIVE MONITOR ERRORS THRESHOLD EXCEEDED SYMPTOMS: The ring active monitor errors threshold value has been exceeded. PROBABLE CAUSES: 1) The active monitor may have received a ring purge or an active monitor present frame that it did not transmit. 2) The active monitor may have received a claim token MAC frame which indicates that a duplicate active monitor or another station has detected an error within the active monitor.
CsEvFormat/Event00420213 {d "%w- %d %m-, %Y - %T"} - RING TOKEN ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring token errors threshold value of {I 1} has been exceeded within the timebase value of {I 2}. (event [{e}])	CsPCause/Prob00420213 RING TOKEN ERRORS THRESHOLD EXCEEDED SYMPTOMS: The ring token errors threshold value has been exceeded. PROBABLE CAUSE: The active monitor has recognized an error condition that requires a token to be transmitted. This occurs when the timer for a valid transmission expires (10ms).

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420214 {d "%w- %d %m-, %Y - %T"} - RING CLAIM TOKEN THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring claim token threshold value of {I 1} has been exceeded within the timebase value of {I 2}. (event [{e}])	CsPCause/Prob00420214 RING CLAIM TOKEN THRESHOLD EXCEEDED SYMPTOMS: The ring claim token threshold value has been exceeded. PROBABLE CAUSES: When a station in standby monitor state has determined that there is no active monitor operating on the ring. If the station claims the token, it becomes the new active monitor for the ring.
CsEvFormat/Event00420215 {d "%w- %d %m-, %Y - %T"} - RING LOST FRAMES THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring lost frames threshold value of {I 1} has been exceeded within the timebase value of {I 2}. (event [{e}])	CsPCause/Prob00420215 RING LOST FRAMES THRESHOLD EXCEEDED SYMPTOMS: The ring lost frames threshold value has been exceeded. PROBABLE CAUSE: The ring lost frame error occurs when a station is transmitting and its timer for return expires. The lost frame count keeps track of how many frames transmitted by a station fail to return. If a frame becomes lost the active monitor will issue a new token.
CsEvFormat/Event00420216 {d "%w- %d %m-, %Y - %T"} - RING BEACON STATE THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring beacon state threshold value of {I 1} has been exceeded within the timebase value of {I 2}. (event [{e}])	CsPCause/Prob00420216 RING BEACON STATE THRESHOLD EXCEEDED SYMPTOMS: The ring beacon state threshold value has been exceeded. PROBABLE CAUSE: When a station determines that a serious ring failure has occured it will generate a beacon MAC frame.
CsEvFormat/Event00420217 {d "%w- %d %m-, %Y - %T"} - RING FRAME COUNT THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring frame count threshold value of {I 1} has been exceeded within the timebase value of {I 2}. (event [{e}])	CsPCause/Prob00420217 RING FRAME COUNT THRESHOLD EXCEEDED SYMPTOMS: The ring frame count threshold value has been exceeded.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420218 {d "%w- %d %m-, %Y - %T"} - STATION LINE ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that station {O 3} has exceeded the line errors threshold value of {I 1} within the timebase value of {I 2}. (event [{e}])	No probable cause message.
CsEvFormat/Event00420219 {d "%w- %d %m-, %Y - %T"} - STATION INTERNAL ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that station {O 3} has exceeded the internal errors threshold value of {I 1} within the timebase value of {I 2}. (event [{e}]	No probable cause message.
CsEvFormat/Event0042021a {d "%w- %d %m-, %Y - %T"} - STATION BURST ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that station {O 3} has exceeded the burst errors threshold value of {I 1} within the timebase value of {I 2}. (event [{e}])	No probable cause message.
CsEvFormat/Event0042021b {d "%w- %d %m-, %Y - %T"} - STATION A/C ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that station {O 3} has exceeded the A/C errors threshold value of {I 1} within the timebase value of {I 2}. (event [{e}])	No probable cause message.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event0042021c {d "%w- %d %m-, %Y - %T"} - STATION RECEIVER CONGESTION THRESHOLD EXCEEDED - Device {m} of type {t} reported that station {O 3} has exceeded the receiver congestion threshold value of {I 1} within the timebase value of {I 2}. (event [{e}])	No probable cause message.
CsEvFormat/Event0042021d {d "%w- %d %m-, %Y - %T"} - STATION REMOVE FAILURE - Device {m} of type {t} reported that station {O 1} could not be removed from the ring after three attempts. (event [{e}])	No probable cause message.
CsEvFormat/Event00420220 {d "%w- %d %m-, %Y - %T"} - PORT INSERTED - Device {m} of Type {t} reported that a station has been inserted into Board {I 1}, Port Group {I 2}, Port {I 3}. (event [{e}])	No probable cause message.
CsEvFormat/Event00420221 {d "%w- %d %m-, %Y - %T"} - PORT DEINSERTED - Device {m} of Type {t} reported that a station has been deinserted from Board {I 1}, Port Group {I 2}, Port {I 3}. (event [{e}])	No probable cause message.
CsEvFormat/Event00420222 {d "%w- %d %m-, %Y - %T"} - RING SPEED FAULT - Device {m} of Type {t} reported that Board {I 1} has entered the Ring Speed Fault State. (event [{e}])	No probable cause message.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420223 {d "%w- %d %m-, %Y - %T"} - RING SPEED FAULT CLEARED - Device {m} of Type {t} reported that Board {I 1} has left the Ring Speed Fault State. (event [{e}])	No probable cause message.
CsEvFormat/Event00420224 {d "%w- %d %m-, %Y - %T"} - RING PORT FAULTED - Device {m} of Type {t} reported that board {I 1} , Port Group {I 2}, Port {I 3} has entered the Wrapped State while its Management State was enabled. (event [{e}])	CsPCause/Prob00420224 RING PORT FAULTED SYMPTOMS: A ring port has entered the wrapped state while its management state was enabled. PROBABLE CAUSES: 1) Bad cable connected to affected port. 2) Device is down at other end of the cable. 3) Device connection is bad at other end of the cable. RECOMMENDED ACTIONS: 1) Check cable connected to affected port. 2) Power up device at other end of the cable. 3) Check device connection at other end of the cable.
CsEvFormat/Event00420225 {d "%w- %d %m-, %Y - %T"} - RING PORT FAULT CLEARED - Device {m} of type {t} reported that board {I 1}, Port Group {I 2}, Port {I 3} has left the Wrapped State. (event [{e}])	No probable cause message.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420226 {d "%w- %d %m-, %Y - %T"} - BEACON STATE - Device {m} of type {t} reported that Beacon Type {I 8} has been detected on Ring {I 1} from station {T string 2}, address {X 3}. The Upstream Neighbor Station is {X 4}, Board {I 5}, Port Group {I 6}, Port {I 7}. (event [{e}])	CsPCause/Prob00420226 BEACON STATE SYMPTOMS: A station attached to this device has detected a new beacon on the ring while the ring was in operational state. PROBABLE CAUSES: 1) The cable between this station and its upstream neighbor. 2) The token ring card in the upstream neighbor station is bad. 3) This station's token ring card is bad. RECOMMENDED ACTIONS: 1) Check the cable between this station and its upstream neighbor. 2) Check the token ring card in the upstream neighbor station. 3) Check this station's token ring card.
CsEvFormat/Event00420227 {d "%w- %d %m-, %Y - %T"} - BEACON STATE CLEARED - Device {m} of type {t} reported that the Last Beacon on Ring {I 1} has been cleared. (event [{e}])	No probable cause message.
CsEvFormat/Event00420228 {d "%w- %d %m-, %Y - %T"} - STATION ADDED - Device {m} of type {t} reported that Station {X 2} has been added to the Allowed Station List. (event [{e}])	CsPCause/Prob00420228 RING SECURITY BREACH - STATION ADDED Unauthorized station has become attached to the ring.
CsEvFormat/Event00420229 {d "%w- %d %m-, %Y - %T"} - STATION REMOVED - Device {m} of type {t} reported that station {X 2} on Ring {I 1} has been removed from the Allowed Station List. (event [{e}])	CsPCause/Prob00420229 RING SECURITY BREACH - STATION REMOVED Unauthorized station has attempted to attach itself to the ring. Station was successfully removed from the ring.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event0042022a {d "%w- %d %m-, %Y - %T"} - STATION REMOVE FAILURE - Device {m} of type {t} reported that station {X 2} could not be removed from Ring {I 1} after three attempts. (event [{e}])	CsPCause/Prob0042022a RING SECURITY BREACH - STATION REMOVE FAILURE Unauthorized station has attempted and succeeded in attaching itself to the ring. After 3 consecutive tries, the station was not successfully removed from the ring.
CsEvFormat/Event0042022b {d "%w- %d %m-, %Y - %T"} - RING SECURITY BREAK- Device {m} of type {t} reported that Token Ring Station Port was removed during a security recover. Board {I 1}, Port Group {I 2}, Port {I 3}. (event [{e}])	No probable cause message.
CsEvFormat/Event0042022c {d "%w- %d %m-, %Y - %T"} - PORT REMOVED DURING FAULT RECOVERY - Device {m} of Type {t} reported that Board {I 1}, Port Group {I 2}, Port {I 3} was removed from the Ring during a Fault Recovery Condition. (event [{e}])	CsPCause/Prob0042020c PORT REMOVED DURING FAULT RECOVERY SYMPTOMS: A port was removed from the ring during a fault recovery condition. PROBABLE CAUSES: 1) Bad cable connected to removed port. 2) Device connection is bad at other end of the cable. RECOMMENDED ACTIONS: 1) Check cable connected to removed port. 2) Check device connection at other end of the cable. 3) After problem is resolved, enable the removed port.
CsEvFormat/Event0042022d {d "%w- %d %m-, %Y - %T"} - PORT GROUP REMOVED DURING FAULT RECOVERY - Device {m} or Type {t} reported Board {I 1} Port Group {I 2} was Bypassed. - (event [{e}])	No probable cause message.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event0042022e {d "%w- %d %m-, %Y - %T"} - BOARD BYPASSED DURING FAULT RECOVERY - Device {m} of Type {t} reported that Board {I 1} was bypassed during a Fault Recovery Condition. (event [{e}])	CsPCause/Prob0042022e BOARD BYPASSED DURING FAULT RECOVERY SYMPTOMS: A module was bypassed during a fault recovery condition. PROBABLE CAUSES: 1) This module is configured with a different ring speed than the hub. RECOMMENDED ACTIONS: 1) Pull out the bypassed module from the hub. 2) Re-configure this module's ring speed to match that of the hub. 3) Physically insert the module back into the hub. 4) Set this module's bypass state to inserted.
CsEvFormat/Event0042022f {d "%w- %d %m-, %Y - %T"} - PORT VIOLATION - Device {m} of Type {t} reported that Board { I 1}, Port Group {I 2}, Port {I 3} in module {I 2} has detected a Link while the Port's Management State was disabled. (event [{e}])	No probable cause message.
CsEvFormat/Event00420230 {d "%w- %d %m-, %Y - %T"} - PORT VIOLATION CLEARED - Device {m} of Type {t} reported that Board { I 1}, Port Group {I 2} in Port {I 3} has detected an Unlink while the port's management state was disabled. (event [{e}])	No probable cause message.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420231 {d "%w- %d %m-, %Y - %T"} - RING PURGE THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring purge threshold value of {I 2} has been exceeded within the timebase value of {I 3} for Ring {I 1}. (event [{e}])	CsPCause/Prob00420231 RING PURGE THRESHOLD EXCEEDED SYMPTOMS: The ring purge threshold value has been exceeded. A ring purge is used to make the ring return to a normal condition. PROBABLE CAUSE: An active monitor will initiate the ring purge process when: 1) A token error condition is detected by the active monitor. 2) An adapter becomes the active monitor in the monitor contention process.
CsEvFormat/Event00420232 {d "%w- %d %m-, %Y - %T"} - RING ACTIVE MONITOR ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring active monitor errors threshold value of {I 2} has been exceeded within the timebase value of {I 3} for Ring {I 1}. (event [{e}])	CsPCause/Prob00420232 RING ACTIVE MONITOR ERRORS THRESHOLD EXCEEDED SYMPTOMS: The ring active monitor errors threshold value has been exceeded. PROBABLE CAUSES: 1) The active monitor may have received a ring purge or an active monitor present frame that it did not transmit. 2) The active monitor may have received a claim token MAC frame which indicates that a duplicate active monitor or another station has detected an error within the active monitor.
CsEvFormat/Event00420233 {d "%w- %d %m-, %Y - %T"} - RING TOKEN ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring token errors threshold value of {I 2} has been exceeded within the timebase value of {I 3} for Ring {I 1}. (event [{e}])	CsPCause/Prob00420233 RING TOKEN ERRORS THRESHOLD EXCEEDED SYMPTOMS: The ring token errors threshold value has been exceeded. PROBABLE CAUSE: The active monitor has recognized an error condition that requires a token to be transmitted. This occurs when the timer for a valid transmission expires (10ms).

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420234 {d "%w- %d %m-, %Y - %T"} - RING CLAIM TOKEN THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring claim token threshold value of {I 2} has been exceeded within the timebase value of {I 3} for Ring {I 1}. (event [{e}])	CsPCause/Prob00420234 RING CLAIM TOKEN THRESHOLD EXCEEDED SYMPTOMS: The ring claim token threshold value has been exceeded. PROBABLE CAUSES: When a station in standby monitor state has determined that there is no active monitor operating on the ring. If the station claims the token, it becomes the new active monitor for the ring.
CsEvFormat/Event00420235 {d "%w- %d %m-, %Y - %T"} - RING LOST FRAMES THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring lost frames threshold value of {I 2} has been exceeded within the timebase value of {I 3} for Ring {I 1}. (event [{e}])	CsPCause/Prob00420235 RING LOST FRAMES THRESHOLD EXCEEDED SYMPTOMS: The ring lost frames threshold value has been exceeded. PROBABLE CAUSE: The ring lost frame error occurs when a station is transmitting and its timer for return expires. The lost frame count keeps track of how many frames transmitted by a station fail to return. If a frame becomes lost the active monitor will issue a new token.
CsEvFormat/Event00420236 {d "%w- %d %m-, %Y - %T"} - RING FRAME COUNT THRESHOLD EXCEEDED - Device {m} of type {t} reported that the ring frame count threshold value of {I 2} has been exceeded within the timebase value of {I 3} for Ring {I 1}. (event [{e}])	CsPCause/Prob00420236 RING FRAME COUNT THRESHOLD EXCEEDED SYMPTOMS: The ring vrame count threshold value has been exceeded.
CsEvFormat/Event00420237 {d "%w- %d %m-, %Y - %T"} - STATION LINE ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that station {O 3} has exceeded the line errors threshold value of {I 1} within the timebase value of {I 3} for Ring {I 1}. (event [{e}])	CsPCause/Prob00420237 LINE ERRORS THRESHOLD EXCEEDED SYMPTOMS: The Line Errors Threshold Value has been exceeded.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00420238 {d "%w- %d %m-, %Y - %T"} - STATION INTERNAL ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that station {X 4} has exceeded the internal errors threshold value of {I 2} within the timebase value of {I 3} for Ring {I 1}. (event [{e}]	CsPCause/Prob00420238 LOST INTERNAL ERRORS THRESHOLD EXCEEDED SYMPTOMS: The Lost Internal Errors Threshold Value has been exceeded.
CsEvFormat/Event00420239 {d "%w- %d %m-, %Y - %T"} - STATION BURST ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that station {X 4} has exceeded the burst errors threshold value of {I 2} within the timebase value of {I 3} for Ring {I 1}. (event [{e}])	CsPCause/Prob00420239 LOST BURST ERRORS THRESHOLD EXCEEDED SYMPTOMS: The Lost Burst Errors Threshold Value has been exceeded.
CsEvFormat/Event0042023a {d "%w- %d %m-, %Y - %T"} - STATION A/C ERRORS THRESHOLD EXCEEDED - Device {m} of type {t} reported that station {X 4} has exceeded the A/C errors threshold value of {I 2} within the timebase value of {I 3} for Ring {I 1}. (event [{e}])	CsPCause/Prob0042023a ADDRESS/COPIED ERRORS THRESHOLD EXCEEDED SYMPTOMS: The Address/Copied Errors Threshold Value has been exceeded.
CsEvFormat/Event0042023b {d "%w- %d %m-, %Y - %T"} - STATION RECEIVER CONGESTION THRESHOLD EXCEEDED - Device {m} of type {t} reported that station {X 4} has exceeded the receiver congestion threshold value of {I 2} within the timebase value of {I 3} for Ring {I 1}. (event [{e}])	CsPCause/Prob0042023b RECEIVER CONGESTION ERRORS THRESHOLD EXCEEDED SYMPTOMS: The Receiver Congestion Errors Threshold Value has been exceeded.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event0042023c {d "%w- %d %m-, %Y - %T"} - RING SPEED FAULT - Device {m} of Type {t} reported that Board {I 1}, Port Group {I 2}, Port {I 3} has entered the Ring Speed Fault State. - (event [{e}])	No probable cause message.
CsEvFormat/Event0042023d {d "%w- %d %m-, %Y - %T"} - RING SPEED RAULT CLEARED - Device {m} of Type {t} reported Board {I 1}, Port Group {I 2}, Port {I 3} has left the Ring Speed Fault State. - (event [{e}])	No probable cause message.
CsEvFormat/Event0042023e {d "%w- %d %m-, %Y - %T"} - RING SPEED RAULT CLEARED - Device {m} of Type {t} reported Board {I 1}, Port Group {I 2}, Port {I 3} has left the Ring Speed Fault State. - (event [{e}])	No probable cause message.
CsEvFormat/Event0042023f {d "%w- %d %m-, %Y - %T"} - TR TPIM INSTALLED - Device {m} of Type {t} reported a TPIM was inserted on Board {I 1}, Port Group {I 2}, Port {I 3}. - (event [{e}])	No probable cause message.
CsEvFormat/Event00420240 {d "%w- %d %m-, %Y - %T"} - NEIGHBOR NOTIFICATION FAILED - Device {m} of Type {t} reported that neighbor notification process has not completed on Ring {I 1}. - (event [{e}])	No probable cause message.
CsEvFormat/Event00420241 {d "%w- %d %m-, %Y - %T"} - FAULT RECOVERY OSCILLATION - Device {m} of Type {t} reported that Ring {I 1} is oscillating. (event [{e}])	CsPCause/Prob00420241 FAULT RECOVERY OSCILLATION SYMPTOMS: The ring is oscillating. Oscillation occurs when the ring fails a short time after recovery.

Table 4-1. TRMM/TRMMIM Events and Alarms (Continued)

Message in the Event Log	Alarm View Probable Cause Message
CsEvFormat/Event00010810 {d "%w- %d %m-, %Y - %T"} - RMON rising threshold trap received from model {m} of type {t}. AlarmVariable {O 2}, AlarmSampleType {I 3}, AlarmValue {I 4}, and AlarmRisingThreshold {I 5}. (event [{e}])	CsPCause/Prob00010810 REMOTE MONITOR RISING ALARM THRESHOLD EXCEEDED This trap will be generated when the value of the trap exceeds the rising threshold for the alarm.
CsEvFormat/Event00010811 {d "%w- %d %m-, %Y - %T"} - RMON falling threshold trap received from model {m} of type {t}. AlarmVariable {O 2}, AlarmSampleType {I 3}, AlarmValue {I 4}, and AlarmFallingThreshold {I 5}. (event [{e}])	CsPCause/Prob00010811 REMOTE MONITOR FALLING ALARM THRESHOLD EXCEEDED This trap will be generated when the value of the trap exceeds the falling threshold for the alarm.
CsEvFormat/Event00010812 {d "%w- %d %m-, %Y - %T"} - RMON packet match trap received from model {m} of type {t}. Channel description: {S 3}. Channel had {I 2} matches. (event [{e}])	CsPCause/Prob00010811 PACKET MATCH TRAP This trap will be generated when a packet is captured by a channel that is configured for sending SNMP traps.

Chapter 5

Application View

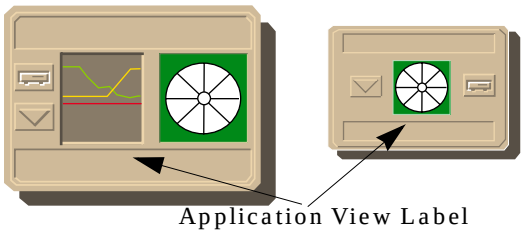
What Is in This Chapter

This chapter describes the application view for the TRMM/TRMMIM Management Module.

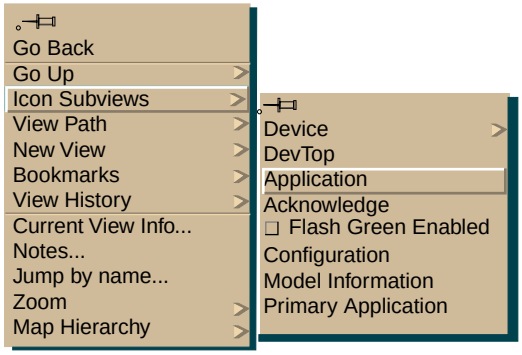
Accessing the Application View

Access the Application view using one of the following methods:

- Double-click on the Application view label of the device icon.



- Highlight the device icon and select Application from the Icon Subviews menu.



TRMM/TRMMIM Application View

The Application view for the TRMM/TRMMIM displays applications that allow access to increasingly detailed views of network information. The device-specific applications are as follows:

- Token Ring Application (CtTokenRingApp)
- Token Ring Managment (CtTokenRingMgt)

The following common applications are described in the *Bridging Applications Reference*, the *MIB II Applications Reference*, or the *Miscellaneous Applications Reference:*

- Bridging (CSIBridge)
  - Spanning Tree (Ct_Stp_App)
  - Transparent (Transparnt_App)
  - Ethernet Special Database (Ct_BdgEnet_App)
  - Static (Static_App)
  - PPP
  - Source Routing
- MIB-II (SNMP2_Agent)
  - IP (IP2_App)
  - System (System2_App)
  - ICMP (ICMP_App)
  - UDP (UDP2_App)
- DownLoad App (CtDownLoadApp)

The Application view can be displayed in two modes - the icon mode and the list mode. Select Mode -> List or Mode -> Icon from the View menu. An example of a TRMM Application view in the icon mode is shown in Figure 5-1. An example of the same TRMM Application view in the list mode is shown in Figure 5-2.

Figure 5-1. TRMM Application View (Icon Mode)

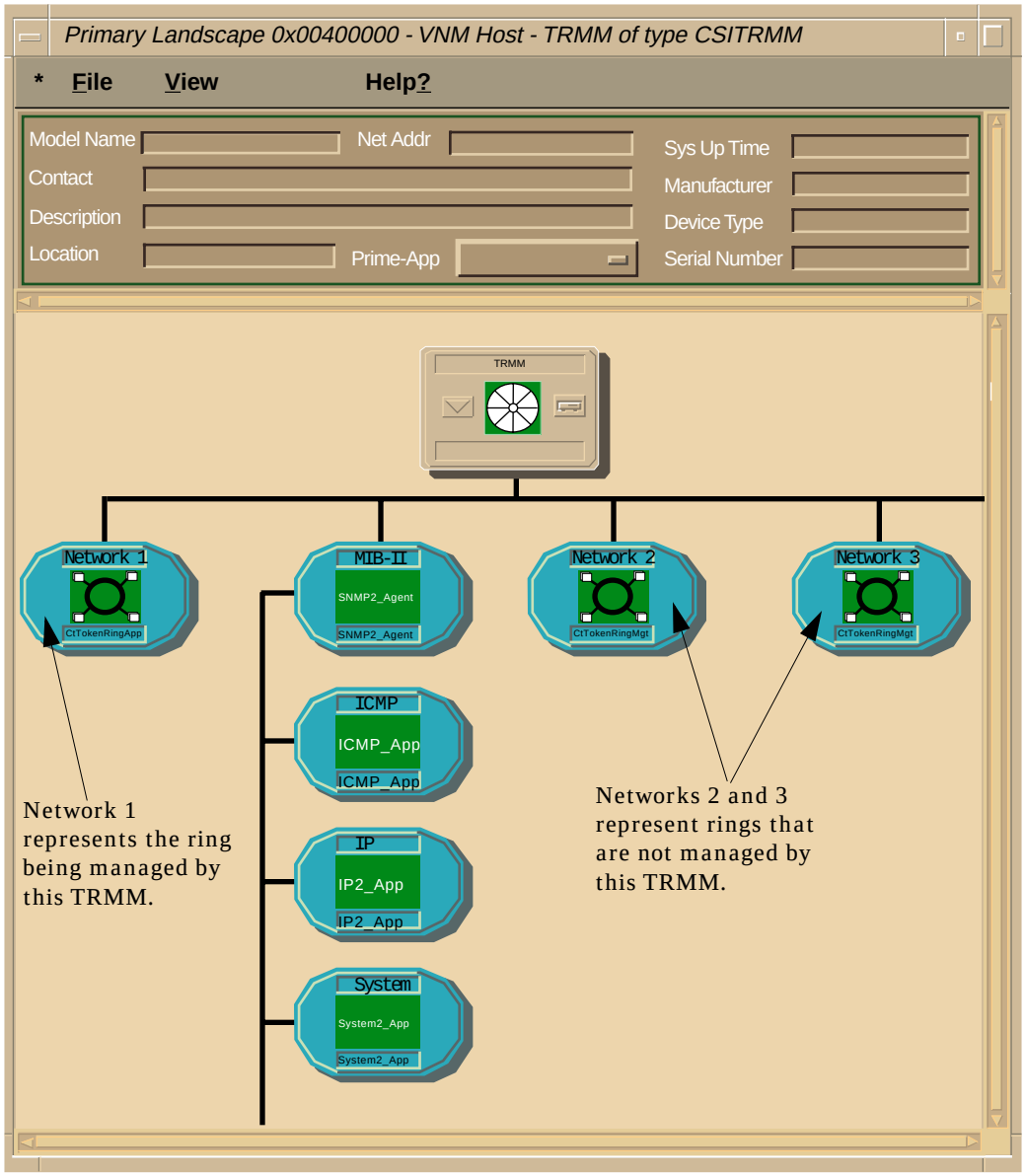
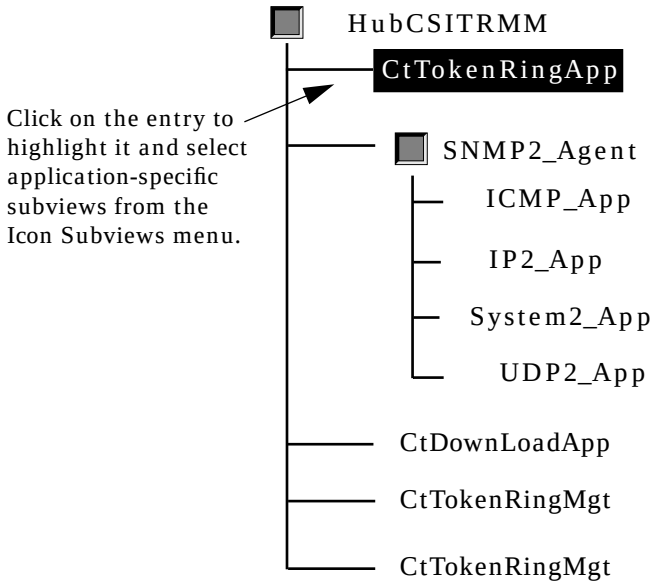


Figure 5-2. Application View (List Mode)



Token Ring Application (CtTokenRingApp) Views

This section describes the views available for the Token Ring application supported by the TRMM/TRMMIM. The supported Token Ring application (Network 1) has a corresponding model type name of CtTokenRingApp. The following four application-specific subviews are available for the Token Ring application:

- Token Ring Performance
- Token Ring Configuration
- Token Ring Station Table
- Token Ring Station Isolating Errors

For information on the Token Ring Configuration, Station Table, and Station Isolating Errors views, refer to Chapter 3, *Configuration Views.*

Token Ring Performance

The Token Ring Performance view provides performance information pertaining to the ring being managed by the TRMM/TRMMIM.

Multi-Attribute Line Graph

The Multi-Attribute Line Graph provides a general indication of device activity. The attributes displayed are pre-selected and use colors to represent different statistics. Buttons allow you to modify the statistical presentation of the Multi-Attribute Line Graph. Table 5-1 provides the color definitions for the Network 1 application.

For more information on the Multi-Attribute Line Graph, refer to the *SPECTRUM Views Reference.*

Table 5-1. Network 1 Performance Statistic Color Definitions

Statistic	Color
Load	Green
Frame Rate	Blue
Error Rate	Orange
Stations	White

Error Detail

The Error Detail button accesses the Token Ring Error Detail view, which provides the following information:

Active Monitor Changes
The number of times the active monitor has been changed on this ring.

Ring Purges
The number of times the active monitor has purged the ring.

Beacon Events
The number of times the ring has entered a beaconing state.

Longest Beacon Duration
The length of time, displayed in days+hours:minutes:seconds, of the longest beaconing state on this ring.

Last Beacon Duration
The length of time, displayed in days+hours:minutes:seconds, of the last beaconing state on this ring.

Last Beacon Type
The type of beaconing frames last seen on this ring.

This view also provides three color-coded pie charts presenting a breakdown of Token Ring application statistics. Each statistic is presented as a total amount since the TRMM/TRMMIM was initialized and as a percentage of overall traffic. Three buttons at the bottom of each pie chart select the way in which the data is represented (Total, Delta, and Accum). Another button, Clear, works in conjunction with the Accum button. Table 5-2 through Table 5-4 provide information on the statistics displayed by each chart.

Table 5-2. Frame Breakdown Pie Chart

Statistic	Definition
Frames	The total number of frames detected on this station or ring.
Errors	The total number of errors detected by this station or ring.

Table 5-3. Isolating Errors Breakdown Pie Chart

Statistic	Definition
Line	The total number of line errors that have occurred on this ring.
Burst	The total number of burst errors that have occurred on this ring.
A/C	The total number of address/copied errors that have occurred on this ring.
Abort Sequence	The total number of abort sequences transmitted on this ring.
Internal	The total number of internal errors detected by station on this ring.

Table 5-4. Non-Isolating Errors Breakdown Pie Chart

Statistic	Definition
Lost Frames	The total number of times a station has had its TRR timer expire while trying to transmit.
Congestions	The total number of times a station recognizes a frame addressed to it, but has no available buffer space.
Frame Copied	The total number of times a station recognizes a frame addressed to it, and detects that the FS field A bits are set to 1.
Token	The total number of times the station acting as active monitor recognizes an error condition requiring a token be transmitted.
Frequency	The total number of frequency errors on this ring.

Frame Detail

The Frame Detail button accesses the Token Ring Protocol & Frame Size Detail View. This view provides two color-coded pie charts presenting a breakdown of Token Ring application statistics. Each statistic is presented as a total amount since the TRMM/TRMMIM was initialized and as a percentage of overall traffic. Three buttons at the bottom of each pie chart select the way in which the data is represented (Total, Delta, and Accum). Another button, Clear, works in conjunction with the Accum button.

Protocol Breakdown Pie Chart

This pie chart defines the total number of frames seen on this ring for the following statistics:

- SNA
- XNS
- TCP/IP
- Banyan
- IPX
- NETBIOS
- LANNetMgr
- Other

Frame Size Breakdown Pie Chart

This pie chart defines the total number of frames by size seen on this ring. The frame sizes are categorized as follows:

- Up to 63
- 64 to 127
- 128 to 255
- 256 to 511

- 512 to 1023
- 1024 to 2047
- 2048 to 4095
- 4096 and Up

Lin/Log

This button toggles between a linear or logarithmic scale presentation of the graph.

Scroll to Date-Time

This button allows you to set the viewing area of the graph to begin at a specified date and time.

Change Time Scale

This button allows you to specify the Y axis time scale for the graph.

Token Ring Management Application View

The supported Token Ring Management application (Network 2, Network 3, etc.) has a corresponding model type name of CtTokenRingMgt. No application-specific subviews are available for the Token Ring Management application.

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